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CANADA MEDICAL AND SURGICAL JOURNAL.

A

Monthly Record

OF

MEDICAL AND SURGICAL SCIENCE.

EDITED BY

GEORGE E. FENWICK, M.D.

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CANADA

MEDICAL & SURGICAL JOURNAL.

ORIGINAL COMMUNICATIONS.

Subcutaneous Injection of Chloroform in the Treatment of Facial Neuralgia. By Geo. Wood, M.D., C.M.

I wish to lay before the readers of your useful journal a new treatment for neuralgia. I have only seen it tried in two cases, and in both it has been entirely successful. I do not claim the discovery of this method of treatment, nor can I give my authority. I saw it recommended in some American Medical Journal and availed myself of it in the treatment of one of the severest and most obstinate cases of facial neuralgia, that it was ever my misfortune to meet with.

D. C. H. Aged about fifty, dark hair, eyes and complexion, very spare, weight 125 lbs, has suffered from facial neuralgia of left side of the face since 1854, has undergone all systems of treatment with little or no relief. In 1872 had the lower jaw trephined and a section of the nerve removed, this gave him relief for several months, but eventually the neuralgia returned harder, if possible, than ever. He first came under my care in August 1873. I gave him different iron tonics, bark, hypodermic injections of morphia, croton chloral hydrate, and also the different and various neuralgic pills that I ever heard of, with but temporary success.

In August of 1874, I injected 15 minims of chloroform underneath the mucous membrane of the lower jaw, as near the exit of the mental branch of the 5th pair as I could. It gave him entire relief in an hour, but caused partial paralysis of the muscles of the left cheek. In a week I repeated the injection and put him upon drachm doses

of the Elix. of Guarana three times a day. In September and December, and also in April, he had a very slight return of the pain, each recurrence being less severe. At each of these times I repeated the chloroform, and he now seems to be entirely well.

My partner, Dr. Rose, had a lady patient, unmarried, æt about 45, who had been a terrible sufferer from the same disease for seventeen years, had consulted the most eminent men in this and foreign countries, and had tried all the prescriptions recommended. The only thing that gave her any relief was the hypodermic injection of morphia. She was obliged to use them, sometimes several times a day. Her mind and morals were very much disordered. Dr. Rose tried the hypodermic use of Chloroform, and she is now entirely well. Her mind is as clear as of yore, and she seems and acts like a new being. The injection of chloroform is extremely painful unless preceded by an injection of ten or fifteen minims of Magendie's sol. of morphia. If this suggestion can give relief to others suffering from this most painful disease I shall be most happy. I intend using the chloroform in the first case of Sciatica that comes into my hands.

Faribault, Minn., June, 1875.

Case of Invagination or Intussusceptio, recovery under the care of GEORGE C. DUNCAN M. D., C. M.

On the evening of May 8th, I was called to see B. McP. aged 17 months. On entering the room I found the patient in her father's arms, very cross and restless, face flushed, pulse rapid, respiration hurried and stertorous. The nurse informed me that the child had been very restless for several days and would start in her sleep, and had eaten nothing but milk for which it had a great desire, taking large quantities during the day. She also stated that the child had vomited several times to-day, that her

bowels had been regular until four days previous, when she had a slight diarrhœa for one day, and had not had any motion for two days, until this morning, when she passed a few hard masses of fœcal matter. The abdomen was moderately tympanitic, but on account of the child's crying I could elicit nothing by percussion. Thinking that it might be worms, I ordered

R. Santonin, grs. vi.
ft. pulv iii.

One to be taken every 12 hours.

Also ℥ss of ol Ricini to be given immediately.

May 9th, I was called early this morning, the messenger stating that the child was very bad. Upon my arrival I found that the bowels had not been moved. The abdomen more tympanitic than last evening, and the symptoms then found much increased. I immediately proceeded to give the child an injection of soap and water but before doing so on introducing my finger into the rectum about 1⅛ inches it came in contact with a firm rounded tumor with a depression in the centre, imparting a sensation to the finger much like the os uteri ; with steady pressure it would recede but immediately return on the withdrawal of the finger. I proceeded to administer an enema, but could not get more than a few ounces to enter, but by withdrawing the syringe and forcing the bowel up as far as my finger could carry it and lowering the child's shoulders I succeeded by using firm and steady pressure in injecting about a pint. On withdrawing the syringe I was surprised to find that no fluid escaped, and upon examining I found that there was a large mass of hardened fœces plugging the anus, which by the continued pressure of the fluid above, and the straining of the child forced the rectum so low down, that I could exert pressure through the perineum behind the mass, and much to the astonishment of the child's father, I succeeded in getting out a piece of hardened fœces 2¼ inches in length and 1 inch in diameter, and immediately following it several

small pieces with the enema. On another digital examination the same state existed, but the tumor was much smaller and softer and could be returned quite easily as far as the finger could reach. The child appeared much relieved, and I ordered her to be kept quiet, and allowed nothing to eat or drink, except a little cold water and milk to allay thirst.

(6 P.M.,) Very restless, respiration and pulse increased since this morning. On examining per rectum the tumor was increased, and is harder than when I left it in the morning, I gave another injection and removed with my finger two oval pieces of fœcal matter, about ¾ inch in diameter and ½ inch in thickness.

May 10th. Did not sleep well last night, and is very cross and restless, and appears weak, abdomen still some. what tympanitic. Gave another injection, but did not remove any fœcal matter. I then passed a small flexible bougie which met with a slight obstruction about 4 inches from the anus but with gentle pressure it passed easily some 6 or 8 inches farther, when it was stopped, and following its withdrawal there were several ounces of thin fœcal matter, which was suddenly stopped, and followed by violent straining; I then withdrew with my finger two more hardened masses. The parents and friends becoming alarmed about the child starving, I ordered chicken broth and small quantities ℥ss. of brandy every three hours.

(6 P.M.,) Much better and wants to walk.

May 11*th*. Had a natural motion of its bowels this morning and seems much better, and asks for something to eat; ordered beef tea, and to be kept quiet.

May 25*th*. Since last date the child has been doing well and has been walking about as usual appearing quite recovered, her bowels acting quite naturally.

Cowansville, May 20th, 1875.

Hospital Reports.

MEDICAL AND SURGICAL CASES OCCURRING IN THE PRACTICE OF THE MONTREAL GENERAL HOSPITAL.

Reported by J. C. CAMERON, M.D., *House Surgeon, M.G.H.*

In Dr. MacCallum's wards, during the past two months, several cases of interest have been under observation ; from the very careful and complete notes taken by the members of the Clinical Class, the following brief reports have been arranged :

Iodoform as a Local Application.

As considerable attention has been directed of late to the action of Iodoform, and as its results have been described as being but little short of marvellous, Dr. MacCallum determined to try it upon several chronic ulcers which had resisted all the ordinary modes of treatment.

CASE 1.—J. D., admitted with a large unhealthy ulcer, evidently of specific origin, situated about the middle of the thigh on its posterior surface. It was three inches long by two inches broad. The edges were hard, raised, thickened and undermined in places. The discharge was copious and sanio-purulent. Poultices, carbolic wash, red wash, black wash, chloral wash, and nitric acid wash were all tried in turn, without altering much the unpromising appearance of the sore. Iodoform reduced to a very fine powder was dusted over the whole sore, and in thirty-six hours a lapsing of cicatricial tissue had formed around the edges and the sore was reduced about three-fourths its original size. The powder was applied on three occasions afterwards and in three weeks from the first application, the sore was completely healed, the cicatrix being unusually firm and healthy in appearance.

CASE 2.—J. D., a laboring man, 40 years of age, engaged in blasting stone for the Corporation, got his leg severely

injured by a blast in January; a large fragment of rock struck his leg inflicting a contused and lacerated wound in the calf and tearing the flesh from the heel in a fearful manner. The torn edges were brought as closely together as possible, free exit was given to the products of inflammation, and after a great deal of trouble the wound was all healed except a small patch about two inches long by one broad, just in front of the internal malleolus. This resisted every sort of stimulating application, including strapping and blistering. The surface was ash grey in color devoid of granulations, with hard, raised, thickened round edges. After five applications of the Iodoform the sore was reduced to about the size of a bean, and in a few days more it will be quite well.

Case 3.—B. M., æt 43, admitted with ten or twelve small unhealthy sores between the knee and ankle of the right leg. Eighteen years ago, she scratched her leg with a rusty nail, the wound ulcerated, and since that time she has never been quite free from those small painful and irritable-looking sores, for as fast as some would heal, others would break out. With her, too, all sorts of applications had been tried, but without any very marked effects; blisters seemed to answer better than anything else in her case. Iodoform was applied five times and the leg healed up thoroughly.

Case 4.—W. M., æt 23, admitted with two large chancroids. Various stimulating and alterative washes were applied, as black wash, chloral wash, nitric acid wash, &c.; but the progress of the case was slow. Iodoform was applied twice, and the man left hospital almost well.

There are several other cases of the Iodoform treatment under observation, but the notes are not yet completed. Iodoform seemed in the above cases to act as a rapid and powerful alterative. About ten minutes after the powder had been dusted on the sore, the taste of Iodine was quite perceptible in the mouth: slight dryness of the throat was

felt by some, nausea by others; while one complained of a continual sour taste in the mouth and throat, which made her unwilling to drink any milk for fear of souring it. The action of the Iodoform seemed most marked in these cases in which a specific taint existed. The unhealthy ash-grey appearance changed at once and healthy granulations sprang up. When too frequently applied it over stimulated the sore, and had to be discontinued.

Fracture of the Humerus from a Powerful Wrench of the Wrist.

A rather curious case of fracture was admitted in the month of April. J. D., a soldier, about 40 years of age, a fine, powerful, muscular man, was testing his strength with a comrade by "twisting wrists;" for some little time neither party seemed to gain any decided advantage, till at last the patient's opponent suddenly raised his elbow from the table and gave a sharp quick wrench, snapping the patient's humerus about the middle of the shaft. The arm was put up in the ordinary way, and a good recovery was made in four weeks. The suddenness of the wrench and the violence of the muscular effort exerted by the patient to recover from it proved too much for the resisting power of the bone.

Case of Favus.

T. A., a lad of sixteen, a sailor, applied for admission to Hospital with his head almost completely covered with favus crusts. The hair was mostly short, dry and brittle, and matted with the discharges, and altogether the case seemed by no means very promising. The crusts and hairs were carefully examined under the microscope; the achorion was everywhere very plentiful. He was put upon five drops of Fowler's Solution, three times daily; poultices were applied to the head to clear off the crusts, and epilation

decided upon. The case was then entrusted to Mr. N. Smith, to whose perseverance and assiduity the favorable termination of the case is largely due. A small patch of the scalp was cleared every day by carefully pulling out each hair with a fine pair of forceps. A wash of

Hydrarg, Bichlorid. grs vi,
Ammon. Mur. ʒ ss.,
Aquae ad ʒ viij.

was then rubbed carefully into the cleared surface. All the diseased hairs were in this manner gradually removed and the parasiticide applied to the whole scalp. As new hairs grew up, any which had a suspicious appearance were at once pulled out and the wash well rubbed in. After two months of this treatment, carefully and persistently carried out, the patient left hospital without a vestige of disease. The hair was growing well and was quite healthy in appearance.

Correspondence.

VIENNA, May, 1875.

To the Editor of the Canada Medical and Surgical Journal.

DEAR SIR,—Vienna is certainly the place for one to come to who wishes to post himself in medicine, both general and special. The amount of material is enormous, and the teaching first rate. There is scarcely any organ or part of the body that is not made a specialty of here. In fact, as a friend of mine remarked the other day, some man ought to make diseases of the navel a specialty to complete the list. The Medical Department of Vienna University has a world-wide reputation, and justly so, too, while it still has amongst its Professors such men as Billroth, Hebra, Bamberger, Brücke, Carl Braun, Meynert, and many other lesser lights, all of whom teach daily and are listened to by crowds of admiring students and medical men from all

parts of the globe. The private courses, which are given by the docents and assistants, are the ones most patronized by foreigners, on account of their being less crowded. The great drawback to an Englishman or American is his deficient knowledge of the language. Vienna is the last place in the world one would come to study German, on account of the numbers of English-speaking people here; besides, at the courses, five-sixths of the men are foreigners. The Viennese seem to have a great talent for languages; it is rare to find a man who does not at least speak two. One meets people who speak English everywhere, and they, unlike the Anglo-Saxon, if they know a foreign language even very slightly, are not at all bashful about speaking it, and take every opportunity afforded them of conversing in it. The best thing for a man to do, who intends studying in Vienna, is first to go to some small University town in North Germany, where good German is spoken and there are none of his countrymen near; in this way he will learn as much German in three months as he can in six in Vienna. In these small University towns he will be able also to attend medical cliniques, and I have no hesitation in saying that his time will not be wasted. In these small towns he will see more of real German life, and see the typical hard-working, beer-drinking, duel-fighting German student. I went to Marburg, in Hessen, Prussia, for two months, and am now sorry I did not remain longer, or rather go earlier. Marburg is a very old University town, and has had some celebrated men as Professors, who afterwards were appointed to larger Universities. Amongst those there at present are Professors Lieberkühn and Roser,—the former Professor of Anatomy and the latter of Surgery. Lieberkühn is known to every student of Anatomy and Physiology. I have heard him lecture frequently. He makes Anatomy very interesting, and illustrates his lectures beautifully by specimens and drawings; he is very fond of telling funny stories, and is a great favorite with the students. The Marburg students are

[illegible] and spend four-fifths of their time [illegible] beer and fighting duels. The Medical [illegible] do not indulge in these pastimes to such an extent as students of Philosophy and Languages, and Theology. Many of the Medical students having passed through the [illegible] Faculty, have lived long enough to see the error of their ways and really work hard. Almost every other student one sees is disfigured by scars received in duels. These duels are rarely or never fatal, as they fight always with blunt swords and no thrusting is allowed; every part of the body is protected, except the face and top of the head. The eyes are protected by spectacles, and the throat by a stock which reaches to the chin. Whilst in Marburg I must have witnessed fifty duels; in fact they are of daily occurrence, and on Saturdays there are generally seven or eight.

The Hospital at Marburg contains about a hundred beds. It was here I first saw hypodermic injections of carbolic acid, of the strength of one to fifty, used for erysipelas, and with apparently good results. The injections were made in the neighborhood of the eruption. They also injected carbolic acid of the same strength *into* joints for synovitis. The surgeons spoke highly of this treatment, and certainly, as far as I could see, it did no harm. I also saw here the first operation of transfusion performed in a case of scarlet fever. The temperature in the axilla was 106° Fahr., extremities cold, and pulse not perceptible at the wrist. The blood was injected into the radial artery. The operation was followed by a decided rally, but the patient died twenty-four hours after. Hoping that you will pardon this digression, I shall return to Vienna.

The great advantage of Vienna is the number of special courses constantly going on, on diseases of the eye, ear, throat, &c. On the ear, by Professors Gruber and Politzer; on the throat, by Professors Schroetter, Stoerk, Snitzler, &c. on the eye, by Professors von Jaeger, Arlt, Stillwag, &c. It is extraordinary the number of patients that attend

these cliniques, and at them students have every opportunity of examining the cases. Diseases of the eye can be studied to great advantage, and courses are being continually given on the pathology, diagnosis and therapeutics of the external diseases of the eye. Prof. Jaeger and his assistants give remarkably good practical courses of eye operations and the use of the ophthalmoscope. The courses in Operative Midwifery and Surgery are surpassed nowhere, not even in Paris. Material for these courses never seems to fail, and may be had almost for nothing. In the Operative Surgery courses given by the assistants of Professors Billroth and Dumreicher, one has generally, in a single course, the chance of performing all the operations twice, and some of the minor operations much oftener. The instruction is excellent, and the teacher sees that each one performs the operations carefully. These private courses last as a rule about six weeks, and cost on an average between seven and ten dollars, some more and some less. Students coming to Vienna should endeavor to arrive in October or early in January, as most of the classes at this time are commencing. The opportunities afforded here for studying skin diseases are greater than at any other school in the world. Four or five lectures are given daily, which are illustrated by numerous cases. Prof. Hebra visits his wards every morning at seven, and lectures from eight to nine. He is a very amusing lecturer to listen to, and his remarks on things in general display a large amount of common sense; his manner is rather rough, and at times he makes use of strong language, but his remarks are very original, and he generally tells one something new. A beginner would profit more by first taking a course with some of the other Professors before going to Hebra's clinique, as their manner of teaching is more systematic though not so entertaining as Hebra's. There are no less than five Professors of Skin Diseases connected with the University. Drs. Neumann and Kaposi were made "Extraordinary Professors" at the end of last term. In eczema and psoriasis, tar ointment

(ol. rusci) and green soap (sapo viridis) are used very extensively. There have been some very fine cases of pemphigus lately in the wards, one very severe case of which was treated by water baths. In this case, the man was kept in the bath for four successive days. Scabies, lupus and syphilides are the most common skin diseases here.

There was a curious case of tattooing exhibited lately at the Skin Clinique. It was that of a Greek sailor who was, with the exception of his face and hands, completely covered with tattoo marks from head to foot. Looking at him from a distance, one would imagine that he had a tight-fitting suit of clothes on. On close examination, the tattooing was seen to consist of a most intricate and beautiful pattern, some of the lines of it being almost microscopic. Curious characters were to be seen on some parts, and on his face and hands (the only parts not completely covered) were birds and beasts. His story was that years ago he was wrecked on an island in the Indian Archipelago. His companions were killed by the natives, with the exception of two, who with himself were subjected to this process of tattooing and dedicated to the gods. His two companions died under the process, but he, being a very strong man, survived. He says the tattooing took months before it was entirely completed. His story, I may say, is to be taken *cum grano salis*.

It is rumored that Prof. Recklinghausen of Strasburg is to succeed Prof. Rokitansky. I believe the position has been offered to several North German Pathologists, but none have accepted it. Prof. Rokitansky, it seems, wants to be succeeded by one of his old pupils.

One meets at the different classes people from every part of the globe: Russians, Swedes, Poles, Turks, Swiss, South Americans, and even Japanese. English and Americans are very numerous; there were at least fifty here last winter. So far I have only seen two female students, and they are both Americans. Foreigners are generally charged for courses twice as much as natives. It is quite common to

see a course advertised thus:—Inländer (natives), 10 fl.; Ausländer (foreigners), 20 fl. Some of the teachers are liberal enough to make no difference, but in these cases the course is generally charged for at so high a rate that 'natives' are virtually excluded. All the University lectures, viz: those given by the professors, are of course the same price for all; but foreigners to be able to attend them have to prove that they have studied medicine and have to enroll themselves as "extraordinary" (ausserordentlich) students, unless the Professor has some special arrangement, which, as in the case of Prof. Hebra, allows them to do otherwise. There is a capital Children's Hospital (St. Ann's) quite near the General Hospital, which is very popular with the foreign medical men studying here. Prof. Wiederhofer has a children's clinique daily, and his course is one of the most crowded. His assistants give very good private courses, limited to ten men, in which numbers of out patients are seen, and the members of the class are daily taken through the wards to look at interesting cases. During the winter session there was a great number of croup cases, many of which were fatal. In ten (10) cases, Tracheotomy was performed, but not one recovered. Rickets seems to be the most common children's disease here, and goes by the name of 'Die englische krankheit, (the English disease.) The favorite treatment of pneumonia is by the wet sheet, as far as I could see the success of this method was not very great. The Children's Hospital is very well built and ventilated. One thing that strikes you on entering the wards is seeing over every bed a plate with the name of the person who gave a sum sufficient to furnish one bed. Instead of wards being given by one person as in England it seems to be the fashion for people to give enough to defray the expenses of one, two or three beds.

The corridors of the hospital are prettily decorated with numerous statues representing the various ways children are carried in different parts of the world. Among them is of course the Indian Squaw with a 'papoose' on her back

and a hatchet in her hand. One is often surprised at the class of people one sees at the cliniques. It is no uncommon thing for a lady to come with a child in a carriage, accompanied by a nurse. Many of the patients without doubt could afford to pay a doctor. The doctors here are miserably paid. Legally, I believe (unless they are professors) they can only collect twenty kreuzers (ten cents) a visit, but one gulden (fifty cents) is the usual fee. In the University there are two Professors of Anatomy, and two sets of Lecture and Dissecting Rooms. Prof. Langer is Hyrtl's successor. Hyrtl resigned his post last year and is now living a few miles out in the country, where he spends most of his time gardening. He has taken his museum with him, and still continues to put up a few of those beautiful microscopic specimens for which he is famed. His museum, I hear, is soon to go to America, having been sold to a college in Philadelphia.

Subjects being so plentiful, dissecting costs nothing. As a rule, they are not injected, unless the student especially requests it. No preservative injection is used, it not being an object, where material is so abundant, to preserve a subject for any length of time. The lectures in anatomy are well worth attending; they are beautifully illustrated by specimens and diagrams. The black-board is used a great deal here in teaching Anatomy. A student who wishes to read anything up specially can always procure as many dried preparations, bones and 'pickled' specimens, as he needs. Connected with the Disecting Room is a place fitted up with apparatus for preparing bones. Any number of bones are always lying loose about the Dissecting Room for the use of students. The Prosectors of Anatomy give private courses on "Practical Anatomy" which are numerously attended by students going up for examination. They dissect out roughly before the class what they intend to demonstrate, and have a fresh subject every day. The amount of material used up is startling to one who has always been accustomed to be careful of it on occount of

its scarcity. Quite near the hospital is a medical college called the "Josephinium," founded in 1784, by Joseph II, for the education of military surgeons. The college contains a magnificent wax anatomical museum, said to be the finest in the world. Some of the models are very beautiful and are the works of celebrated artists. One model alone cost twenty thousand dollars. This museum is open to medical men daily from eleven till one. There has been a great deal of typhus fever here this winter, the patients are put in the wards with ordinary cases of pneumonia, phthisis, &c. Of late, there have been so many cases that they are thinking of building a special hospital for them, a thing which should have been done long ago. Last week a child was born in Prof. Braun's wards, without eyes, the lids were perfect but the eye-balls were completely wanting. Prof. Braun said he knew of but one similar case. During the winter Prof. Braun has shewn his class numbers of interesting cases, among which were two of double uterus. In the first of these cases the diagnosis of fibrous tumour was made and the true nature of the case was not found out till the supposed tumour had been cut into, and about a pound of retained menstrual fluid escaped. The woman died six days afterwards of peritonitis, and at the autopsy it was found that the right horn of the uterus did not communicate with the vagina, but was connected with the right ovary. The right ovary was merely a sac, and both it and the right Fallopian tube were much distended by the retained fluid.

When a case occurs in the midwifery wards requiring operative interference, and the time suits, it is brought into the lecture room and the operation performed before the class. Simpson's forceps are the ones most used here.

When a patient dies in hospital he remains in the bed and in the ward he died in for three hours, then he is taken to the dead-house, placed in a large room in bed, and has his fingers attached to a bell by a string, so that should he make the slightest movement, the bell rings and the atten-

dants are aroused. The room contains about twenty-four beds, and looks exactly like an ordinary hospital ward. It is rather a strange sight to see a ward full of corpses in bed. After having remained here twenty-four hours, a post-mortem is made (in every case). Then, if the patient has friends who can afford to pay for his funeral he is delivered to them, if not, he goes to one of the numerous departments requiring material. There is no case on record in this hospital where a patient has ever come to life after having been placed in this room as dead. It is an old custom (and the law requires that they should observe it), to keep a body with bell attached twenty-four hours after death.

The weather all last winter was very severe, such a continuous low temperature not having been known for years.

There was good skating every day during January and February. Snow storms were of daily occurrence. At present it is quite summer-like, the leaves are all out, and everything looks cheerful. In summer the people live almost entirely out of doors. They always, when fine, take their meals outside under awnings and trees which are in the Gardens connected with every 'Restauration.' The Prater is the fashionable promenade and drive and is full of people every afternoon. The cafés, with the crowds of people sitting out under the trees in front of them drinking coffee, the music of the various military bands, and the gay equipages continually passing, make the place both very lively and causes one to forget the disagreeableness of the past winter. To a man who has had a fair medical education, Vienna is the place to come to. Even if he is but slightly acquainted with the language there are many courses in which he can use his eyes and hands to great advantage. After attending lectures for six weeks or two months, and reading at home with a teacher, he will be able to make out pretty clearly all that is said. The expense of living is about the same as in London. Every advantage is here offered to men who wish to study specialities as the eye, ear and throat. Hoping that I have not intruded too much on your valuable space,

I am Sir, yours &c.,

F. S.

Reviews and Notices of Books.

Croup in its Relations to Tracheotomy. By J. Solis Cohen, M. D. 8vo. pp. 78. Philadelphia: Lindsay & Blakiston, 1874.

This is an essay which was read before the Philadelphia County Medical Society, January 14th, 1874, and ordered to be printed by the Medical Society of the State of Pennsylvania in their transactions for that year. The author states that "it is based upon a careful study of the published records of more than five thousand cases of Tracheotomy in croup, performed in various portions of the world." The labour entailed in such a study has been doubtless considerable, and the result has been a useful essay upon the subject.

The paper is limited to the subject of croup in its relations to tracheotomy, and the casualties incident to the disease, independently of the operation, such as general systemic infection, diphtheritic paralysis, pneumonia, and fibrinous deposits in the cavities of the heart, are not discussed.

Statistics are given, taken from French, German, British and American sources, which show that the results of the operation prior to 1850 were in the main unfavorable, and the much greater success which has attended the operation in the past twenty-five years, the author attributes to the increased care taken in the performance of the operation itself, and in the details of the after treatment. Age appears from an extensive range of statistics to have an important bearing on the result of the operation. It is seldom successful in children under two years of age, or over eight or nine, and very seldom or never successful in the adult. Sex does not appear to have any influence on the mortality.

The mortality in private practice is much less than in that of hospitals, for various reasons.

The bulk of the essay is occupied in the consideration of four main topics :

1. The indications for the operation.

2. The points of importance in connection with the operation itself.

3. The after-treatment of the disease and of the surgical wound.

4. The casualties which prevent recovery.

The author gives the opinions of various authorities on Croup as to the indications for the operation. According to Trousseau and Guersant, each of whom bases his opinion upon more than two hundred cases, the only insuperable contra-indication is profound diphtheritic infection of the economy.

The symptom *par excellence*, which calls for operation, according to Professor Heuter, is the marked sinking in of the front of the chest, especially of the lower end of the sternum. When the want of oxygen in the blood, or in other words the want of pure air in the lungs is strongly felt, the diaphragm and the other inspiratory muscles make violent efforts to draw as much air as possible into the chest. But if the free passage of air through the glottis is impeded and but little air enters the lung, the diaphragm does not descend as in ordinary respiration. Its central tendon becomes a fixed point, and its muscular fibres contracting, tend to draw its peripheral insertions toward the centre. The insertions of the diaphragm into the lower end of the sternum and the adjacent costal cartilages are the most movable, and hence these show most clearly the contraction, which draws these portions in powerfully with each inspiratory effort. There is also marked sinking above the clavicles from atmospheric pressure. This, however, usually sets in later than the depression at the epigastrium. Professor Heuter holds that these phenomena are of

more consequence in determining the question of operation, than the degree of stridor. As he says, "a great deal of dyspnoea may go hand in hand with little stridor, and a little dyspnoea with great stridor. Observation of the entire respiratory act affords a much safer estimate of the impediment to breathing." A dark blue color of the lips, and a pale and apparently œdematous condition of the cheeks, shows the retention of carbonic acid gas in the blood. "I consider that the hour for tracheotomy has come as soon as the substernal tissues sink in a marked manner on inspiration, and the blue color appears on the lips."

As regards the operation itself the author favours the use of anæsthetics, and chloroform is the anæsthetic which he prefers. Anæsthesia need not and should not be pushed to its full extent, as the carbonization of the blood has already produced a certain amount of anæsthetic influence. Most authorities appear to agree with these views, and find that chloroform relieves laryngeal spasm, thus enabling more air to enter the chest, while the movements of the trachea are lessened, the child lies quietly, and the physician is not interrupted by his struggles. The method of operating which seems to carry the greatest weight of authority with it, consists in making a careful dissection down to the trachea. As a rule there is no such urgent hurry in performing the operation as to prevent a dissection down to the trachea, and by so doing the risk of wounding the œsophagus, which has occurred in the operation by transfixion and incision at a single stroke, or of not passing the canula into the windpipe at all, is avoided. In the operation by puncture and incision, in several cases the canula has been found lying on the cellular tissue in front or at the side of the trachea.

Trousseau strongly disapproves of undue haste in performing the operation, and he said at the famous discussion on the subject, "A certain surgeon has reproached me with operating like a physician and not like s surgeon. Well, he had an opportunity, on one occasion, to operate like a sur-

geon, and with one stroke of his knife he divided the œsophagus as well as the trachea. Sometime afterwards he lost another patient by hæmorrhage during his brilliant operation. Since then he has operated more like a physician, and after a while he will become a very fair tracheotomist."

As a rule the author advises all hæmorrhage to be stopped before the incision is made into the windpipe, and this view is supported by most experienced tracheotomists. In making the incision care must be taken not to wound the posterior wall of the trachea or make a counter opening into the œsophagus. Sudden death may ensue from the flow of blood into the bronchi. False membrane may be present in the track of the knife, and the point of the knife may not pierce this, but push it back against the posterior wall, shutting up the wind-pipe, and rendering suffocation imminent. In these cases it is recommended to pass an elastic catheter to tear the substance loose, and through it air is blown to excite cough. Another danger is the falling of loosened pieces of false membrane upon the bifurcation, and their passage into the bronchi. This is to be overcome by aspiration through the catheter.

Heuter strongly advocates passing a catheter in every case of membranous croup, immediately after the trachea is opened, and suction should be made through it, to remove all pieces of membrane and blood which may have lodged at or near the bifurcation. The introduction alone of the catheter and its withdrawal will cause the expulsion of some of the blood and membrane without suction, which is not always free from danger to the operator.

After the trachea is incised its edges should be held apart by hooks and search made for the false membrane, as if it were a foreign body, and as much of it removed as possible before the introduction of the canula. Causes delaying the removal of the canula are treated of, and then the author goes on to speak of the after-treatment of the disease and the wound.

To this he attaches much importance, and as the statistics of tracheotomy show, it is mainly to increased care subsequent to the operation, that the comparative success since 1850 is due. The care of the canula is a matter of primary importance, and the author is very strict in his injunctions on this head. The casualties which prevent or retard recovery, as haemorrhage, inflammation of the wound, erysipelas, gangrene, diphtheria of the wound, and emphysema are discussed and their appropriate treatment given. In summing up the author draws the following conclusions:

1. That there are no insuperable contra-indications to tracheotomy in croup.

2. That the administration of an anæsthetic for the purpose of controlling the child's movements is admissible in performing the operation; but that it should be used with great caution.

3. That a careful dissection should be made down to the windpipe, and hæmorrhage be arrested before incising it whenever there is at all time to do so.

4. That the incision should be made into the trachea as near the cricoid cartilage as possible to avoid excessive hæmorrhage and subsequent accidents which might occasion emphysema.

5. That a dilator should be used or a piece of the trachea excised whenever any difficulty is encountered in introducing the tube.

6. That the tube should be dispensed with as soon as possible; or altogether if the case will admit of it.

7. That assiduous attention should be bestowed upon the after treatment, especially that of the wound; and that a skilled attendant should be within a moment's call for the first twenty-four or forty-eight hours immediately following the operation.

Periscopic Department.

SURGERY.

On the Treatment of Heat Apoplexy. By Surgeon-Major J. Davis, A.M.D.

When stationed at Ferozepore in the hot season of 1872. I was called one night to see a patient seized with heat apoplexy. On arrival at the hospital I found the man (an acclimatized soldier) had under the use of the cold douche become partially conscious, and he gave me to understand, by passing his hand across the part, that he was suffering from a sense of constriction around the lower portion of his chest; his breathing was laborious, and he was vainly endeavoring to take a full inspiration. It occurred to me that this state was due to some oppression of the respiratory nervous centre, and thinking cupping from the nape of the neck might be of use, I sent for the cupping case and applied as many of the smaller-sized cupping glasses as available from the occiput down the nape of the neck in pairs, taking blood with the two uppermost, using a temple scarificator; the glasses were only on a few seconds, when the man said "'tis gone now, sir." He became perfectly sensible, breathing natural and easy instead of laborious and imperfect; he recovered without a bad symptom. In one or two subsequent cases, the patients being fully insensible when the cupping glasses were applied, a similar favorable result took place. I had no further opportunity of testing the value of cupping until last year, when Surgeon-Major Scott kindly allowed me to resort to it with a patient of his, a man of E-8, R.A. On our visiting the patient we found him perfectly insensible; breathing labored and stertorous; the free use of the cold douche failed to arouse him in the slightest degree; he was turned on his side and the glass applied as before described. In

a few seconds, the man was perfectly conscious, able to answer questions, but inclined to sleep. Here, unfortunately, we did not let well alone, but resorted to wet packing, with the object of exciting some action of the skin, which was hot and dry. Coma again set in; the wet packing was at once removed, a free douching given, and the glasses again applied, to our great relief, with a similar favorable result. When we consider how oppression of the respiratory nervous centre interferes with the due performance of respiration, inducing congestion of the lungs (so fatal a complication in heat apoplexy), and how suspended or imperfectly performed respiration gives rise to oppression of the medulla oblongata resulting in coma and death, the importance of relieving the oppressed nervous centre becomes apparent; otherwise a vicious circle becomes established; the oppressed medulla interferes with the due performance of the respiratory act, and the imperfectly purified blood circulating in the brain in its turn further increases the oppression of the already damaged nervous centre.

I should, therefore, be glad if those who may have an opportunity of testing the value of cupping the nape of the neck in cases of heat apoplexy would kindly give it a trial and make known the results.

I may remark that the position in which patient lies in heat apoplexy has, I believe, more or less prevented cupping the nape of the neck being resorted to, and that to turn an insensible man, keeping him steady on his side while the glasses are applied, requires some little management.

To recapitulate, I recommend that in a case of heat apoplexy after the free use of the cold douche the patient should be turned on his side, as many small-sized cupping glasses as possible be applied from the occiput down the nape of the neck in pairs (one on either side of the spinal column) taking blood with the two uppermost. This treat-

ment need not interfere with the use of stimulating enemas, turpentine, &c., which indeed should in all cases be resorted to, so as to unload the lower bowel; neither should the use of the catheter be neglected.

DALHOUSIE, *5th April*, 1875. [*Indian Medical Gazette.*

Spina Bifida, Treated by the Elastic Ligature: Recovery.

The series of cases of so-called spina bifida, or, perhaps more correctly, meningocele, which have lately appeared in the *Journal*, induce me to contribute one which came lately under my care in the Leeds General Infirmary; more especially because I treated it in a different manner from those hitherto published, and the result was not only successful, but much more speedily attained.

M. F., aged 8 weeks, the child of healthy parents (who had previously twice had twins, one only of the four children yet surviving, but none having presented any malformation) was brought to the hospital on January 7th, 1875, on account of a globular bluish-coloured fluctuating tumour in the cervical region, of the size of a tennis-ball, which filled up the hollow between the occiput and the fold corresponding to the tops of the scapulæ. The tumour was pediculated, the pedicle being about the thickness of a man's thumb. The attenuated skin which covered it was too tense to admit of much impulse being felt when the child cried; but its transparency enabled one to recognise the arrangement of blood-vessels characteristic of the cerebro-spinal meninges. On pressing the point of the finger upon the under side of the pedicle, a small hole could be felt corresponding with the deficient arches of two (perhaps only one) of the cervical vertebræ. Here a slight impulse was felt when the child cried. The child was puny, and apparently not possessed of much vitality; but there was no paralysis, nor any deformity of the limbs. The parents were told that it would probably die soon in

any case, and that the only chance for it was the removal of the tumour, but that interference was scarcely justifiable. The child was then taken away, but in a week was brought back, the parents saying they had "considered to have something done" if possible. In the interval, the tumour had increased, and became more turgid and tense, seeming as if it would burst. I accordingly admitted mother and child, and having passed a fine elastic ligature four times tightly round the pedicle, enveloped the tumour in cotton-wool. All the first night, the child was restless, crying, and vomiting the breast-milk. Still it sucked, though the milk was rejected directly. A few drops of brandy in a spoonful of warm water given several times, checked the sickness, and thenceforth it began to thrive. The surface of the tumour soon became vesicated and the fluid contents oozed away, reducing the bulk. On the fourth day, the sac was sloughing. The ligature was partially unwound and tightened up. On the sixth day the pedicle separated, when no hole was visible, nor any oozing of cerebro-spinal fluid from the stump. The sac was examined, and found to be a true meningocele. The wound rapidly healed, and the child gained in weight daily, and was discharged at the end of the fortnight. It may be remarked, that the ossification of the cranial bones was less complete than usual at the end of eleven weeks. The anterior and posterior fontanelles communicated by means of an unclosed sagittal suture, and the sphenoidal sutures were also imperfectly united. When last seen, April 2nd, there was scarcely any scar to be seen, and very slight deficiency in the bones could be felt. The child was plump and healthy, but it had a certain idiotic wandering of the eyes.

EDWARD ATKINSON, M.R.C.P.Eng.,
Surgeon to the Leeds General Infirmary.

—*British Medical Journal.*

Death from Ether Inhalation.

Unfortunately, even ether, it seems, is not to be inhaled always with impunity. A boy, aged 16, was operated on by Dr. Hardie, of Manchester, at the Workhouse Infirmary, on the 3rd of April, 1875. Four drachms of ether were poured on a piece of lint and placed in a folded towel, which was held pretty close to his face. There was no coughing, and but little struggling. He was ready for operation in about four minutes without any more ether. The respiration suddenly ceased, and the pulse at the wrist became imperceptible. The tongue was pulled forward and the poles of a battery applied to the phrenic nerves. Cold water affusion, artificial respiration, and suspension by the feet were tried, without avail. The organs were found healthy. The cavities of the heart were empty. Probably death arose from syncope. Robbin's ether was used.

This is a most untoward event, because it may prevent the growing tendency to use ether instead of chloroform from spreading as it ought. Ether is certainly far safer and ought therefore always to be used instead of chloroform.—*The Doctor.*

The Dangers of Chloroform, etc., and the Nitrite of Amyl.

Mr. C. Bader writes to the *Lancet* that, some years ago, when nitrite of amyl was first used at Guy's Hospital, he with Dr. Goodhart, studied its effects, when taken internally, upon the blood-vessels in the healthy optic disc and retina. The effect, he says, is as rapid as it is striking. Three or four seconds after taking three drops of the drug on sugar the blood-vessels of the retina (arteries and veins, but especially the veins) become enormously dilated and gorged with blood, leaving no doubt as to simultaneously existing cerebral hyperæmia, with greatly accelerated circulation of blood.

Lately, after observing upon himself the effects of inhalation of the vapour of the nitrite of amyl, it occurred to Mr. B. that in cases of faintness or of defective breathing or heart's action, while under the influence of an anæsthetic, nitrite of amyl might be of use. He relates three cases to show the encouraging effects of this agent.

CASE 1.—Given a mixture of alcohol, ether, and chloroform. Young man, hydrocephalic, inherited syphilis; iridectomised on both eyes; suddenly became pale, deeply insensible, with pulse and respiration very defective. Lint, with a few (three) drops of nitrite of amyl, was placed over nose and mouth. In two or three seconds a deep inspiration, followed by others, flushed face, quick pulse, and return of sensibility, were observed.

CASE 2.—Given chloroform, A boy, pale, fat, blue lips and cheeks, became suddenly very faint (blue lips, blood turning black, breathing very imperfect. The same quick result, with vomiting, followed the inhalation of the nitrite of amyl (three drops).

CASE 3.—Given chloroform. A middle-aged woman suddenly became blue in the face and stertorous (tongue falling back.) Lint with ten drops of the nitrite of amyl, was placed over mouth and nose. In a few seconds the blueness and stertorous breathing gave way to good colour, regular breathing, and sickness and vomiting, though no food had been given for several hours.

The most striking effects of the nitrite of amyl were the quick restoration of breathing, of a good colour, and the rapid appearance of sickness. It remains to be shown whether injection of this agent will have a still better effect.—*The Doctor.*

Poisoning by Aconite.

DR. J. E. BLAKE, in an interesting article in the *New York Medical Journal*, relates a very important case of poisoning by aconite and chloroform liniment. An hour

after the poison was taken "*no pulse could be detected even in the axilla, and she remained without any trace of pulse for a period of over three hours.*" Nevertheless, Dr. Blake persevered all day and all night with galvanism and artificial respiration, and was rewarded by complete success. He had previously, within half an hour of the poison being swallowed, used the stomach-pump until fluid returned unimpregnated with it; but enough had been absorbed to do deadly work. This patient became early *unconscious*, and remained so for many hours. Yet almost all writers assert that in aconite poisoning *consciousness* continues to the last. Could the chloroform account for the unusual fact? The lady had taken "a little more than a drachm" of the liniment, which consisted of chloroform and tincture of aconite root in equal quantities.—*The Doctor.*

MEDICINE.

The Case of ARTHUR O'CONNOR, by HARRINGTON TUKE, M.D., F.R.C.P.

The case of Arthur O'Connor is a striking instance of the mistaken views frequently adopted by lawyers as to the value of medical evidence in cases of insanity, and also is an exceptionally strong example of the way in which an advocate, aiming at success, will do his utmost to discredit a medical witness, even although he feels the force of the facts upon which the expert has founded his opinion.

In April 1872, Arthur was arraigned for treason-felony. He had pleaded guilty before the Grand Jury; it is quite clear that he did so under a misapprehension. After some demur on the part of the Court, this plea was allowed to be withdrawn, and the trial proceeded.

The case rested almost entirely upon medical evidence. This was to the effect, that Arthur O'Connor had long been in ill-health; his head had received a severe injury; since that time his disposition had changed. There was a strong

hereditary predisposition to insanity; had had a sudden idea to shoot the Queen, but had abandoned that course for one of intimidation. He had intended to attack Her Majesty in St. Paul's Cathedral on the Day of Thanksgiving for the recovery of the Prince of Wales. Turned out of the Cathedral at two in the morning, he had returned at eight; the crowd prevented his reaching it again, or getting near the Royal carriage. Persistently tracking the Queen, he at last got near her Majesty's person, climbing the iron railings of Buckingham Palace; he had time to present a pistol at the Queen's head before her attendants could arrest him. Upon him was found a coherent but insane document, purporting to be a pardon for the Fenian prisoners, and an order for O'Connor's own execution. Other insane documents were produced. These the counsel for the prosecution objected to receive.

I had seen the boy, at the request of his father, about three weeks previously, and found him to be clearly of unsound mind, entertaining insane opinions, that rendered him dangerous to others. In this view of the case I was strongly confirmed by Dr. Maudsley, who examined the boy with me, and also by Dr. Sabben, who saw him afterwards.

The paroxysm of insanity that led to his outrage seems to have lasted about six weeks, leaving him in his normal state of hypochondriasis and almost imbecility, with a tendency to recurrent attacks, in which he becomes dangerous. The subsequent history of his case entirely corroborates this diagnosis. While in Australia, this condition of insane hypochondriasis continued; and as to the state of his mind, it may be enough to mention that though at times fairly well, at others he had paroxysms of absolute mania. Among other eccentricities, he wrote letters to Her Majesty, one of which suggested that he should be made Poet Laureate, in succession to Tennyson. On the occasion of the last Drawing-room, O'Connor was found in an excited condition, waiting, it is supposed, for Her Majesty, near the very same

place at Buckingham Palace in which his former mad assault upon her was committed.

One of the Queen's physicians, and subsequently Dr. Tweedie, saw O'Connor with me before his arrest. The following is his own written account of his symptoms :

" Physical Symptoms. Back like ice ; want of ability to swallow food. Sinking in Stomach. In cold weather one moment—deadly cold, the next burning hot—pains in the head—completely stupified by cold weather—Mental—want of rest—thought continually revolving upon religion. Visions at night of angels hurling men down precipices to die for ever because they had not given up all they loved and go and sell Bibles to the unconverted. Sense that unless I gave up the drama, witty and convivial Society, novel writing, and the world completely I should be everlastingly damned. In a word, one unceasing mania concerning Jesus Christ—the intellect warring with extreme views yet unable to crush the ever revolving mania. Sense of utter want of constitution and energy in comparison to what I ought to be.

" Naturally I am a poet loving the dramatic writers and poet of nature and at one time of my life, ere I became physically debilitated, quite unsusceptible to the present mania, which leaves me no rest day or night. Of late my brain agony has terribly increased I awoke the other night raging to commit suicide ; the idea occurred as a very delightful one, and just as I was about to spring from my bed to act upon it—it passed off and left me trembling all over and utterly horrified.

" Since then my feelings have risen to absolute madness continually and I know very well it is all physical disease, a dead liver or something of the kind. My home is very wretched. it is in fact a hell to me.

" Naturally I am devoured by energy, running in my walk, and in everything else, but when stupified by dyspepsia scarcely able to drag a foot."

The apparently unanswerable evidence of the insanity of

O'Connor at the time of his outrage upon the Queen, was demolished by the Attorney-General in his cross-examination, mildly described in the *Times* as occasionally "caustic." This was done with great, but, it must now be admitted, with misapplied forensic ability; and, without hearing a single witness for the Crown the jury stopped the case, and found that the prisoner was, and had always been, of sound mind. This, perhaps, also stopped the Attorney General's speech—fortunately, perhaps, as I was his first subject since he had showered vituperation upon the Tichborne Claimant. The ultimate result of this trial should lead future counsel to pause before they utterly ignore experienced medical testimony, at all events, in the prosecution of cases of treason-felony. They may succeed in gaining a verdict, and for the moment overwhelming the physician with ridicule. But supposing, as time has proved in this case, they are in the wrong, hard labour and stripes, and a short imprisonment as a felon, are not likely to cure insanity; and the course taken by the Attorney-General might have imperilled the safety of the Sovereign. As it is, it has nearly led to her being seriously alarmed by the reappearance of the deranged and wild-looking young man near the royal carriage, in the same place where he had before eluded the watchfulness of her attendants.

Another result of the Attorney-General's "unfortunate" advocacy, (I have to thank him for applying to my evidence and so "teaching me that word") has been that three years have been lost; Arthur O'Connor is at last committed to Hanwell Asylum. Under gentle care and treatment in his first attack, he might have recovered. He may do so now, but his chances are materially lessened.

The characteristic judgment and clemency of Her Majesty led to the remission of the hard labour and whipping to which O'Connor had been sentenced, and also to a shortening of the term of his imprisonment. If this had not been so, a curious incident would have illustrated the mistake of the law advisers of the Crown: some of the Fenian

sympathisers seriously proposed to Mr. O'Connor that a procession should be formed to meet his son on his release, and to escort him with due honour to his father's home. It should be quite understood that Mr. O'Connor was entirely opposed to this absurd proposal. I have never noticed the caustic examination of the Attorney-General; nor shall I now, except upon one point—the one by which the jury, and indeed a large section of the public, were mainly misled. It is deserving of careful attention, because it constantly arises in criminal trials, and was in this of paramount importance.

The Attorney-General contrived to persuade the jury that, if they acted upon the medical evidence, the prisoner would be confined for life in Broadmoor Asylum as a criminal lunatic; whereas, if they took the legal view of the case he would escape with a comparatively trivial and salutary punishment. Now, this was trebly "unfortunate." It was purely an *ad captandum*, argument, and entirely irrelevant to the question of the truth of the evidence, which ought not to be, and was not, in any way biased by consideration of results. It, moreover, offered a temptation to the jury to do the wrong, that right might come of it. I was unfairly taunted with attempting to injure, while I was professing to assist. Now, stripped of forensic tinsel, the plain truth stands thus: the parents of the boy, who was then only 17 years of age, were convinced of his insanity, alarmed at his evidently dangerous condition, and most anxious to have for him any treatment that might permanently cure him; they were respectable people, who had been in a superior position, and they were averse to their son's being branded as a felon; it was, therefore, after anxious consultation with them and their counsel, that the course inveighed against by the Attorney-General was adopted; and, in the event of Arthur O'Connor's recovery at Broadmoor, his parents trusted to the strong evidence of the son's previous good character, and thoroughly relied upon

his being the subject of the never failing clemency of Her Majesty.

I freely forgive Lord Coleridge for his personal attack upon myself; it was possibly his professional duty to break down, by every possible means a witness hostile to his own views; but he must surely now deeply deplore his share in a proceeding which consigned a sick and insane boy to degrading punishment, and to a prison instead of an hospital, thus, perhaps, rendering him a hopeless lunatic; he may also regret that he treated a medical witness with much discourtesy, and ridiculed scientific evidence that has ultimately proved correct; and he must feel deeply that his unfortunate advocacy very nearly resulted in injury or alarm to the Royal Mistress whom it was his special duty to protect and defend.

I trust the case of Arthur O'Connor may either lead the English Bar to more extended study, or induce them to receive with greater attention and respect the evidence of those who make medical and other scientific investigations the pleasure and business of their lives.—*British Medical Journal.*

MIDWIFERY.

On Dr. Copeman's Novel Treatment of Obstinate Vomiting in Pregnancy. By GRAILY HEWITT, M.D., F.R.C.P., Professor of Obstetric Medicine in University College.

I have read the valuable practical paper by my friend Dr. Copeman of Norwich on the subject of the treatment of obstinate sickness in pregnancy, in the *British Medical Journal* for May 15th, with much interest. Dr. Copeman has described a process which he has, he states, accidentally discovered; viz., the artificial dilatation of the os uteri by the fingers as a cure for obstinate sickness in pregnancy. His results are remarkable, and, stated as they are by a gentleman of his known experience and accuracy, they are

very important. Dr. Copeman, to use his own words, does not "attempt to explain the *modus operandi* of the treatment suggested"; and I desire to offer what I consider to be the true explanation.

In the year 1871, I read a paper before the Obstetrical Society (see *Transactions*, vol. xiii) on the subject of this vomiting in pregnancy. I there enunciated the theory, which I supported by facts and observations, that obstinate vomiting, and indeed ordinary vomiting, in pregnancy are due to a flexed condition of the uterus, the compression of the tissues of the uterus at the seat of the flexion constituting the irritation which gives rise to the vomiting. My view was strongly criticised at the time, and, indeed, Dr. McClintock of Dublin was at the pains shortly afterwards to write and publish a paper, expressly directed to the abolishing of my theory. I have been content to wait until professional opinion was more ripe for discussing the matter calmly, believing firmly that my view expressed four years ago is in all essential particulars correct.

Dr. Copeman's clinical contribution of three cases has a strong and direct bearing on the above question, and the cases offer to my mind strong confirmation of the truth of my original statement. The three cases occurred respectively at six months, two months, and eight months, and in each case the vomiting at once ceased on dilatation of the os with the finger. In the second case, Dr. Copeman says the uterus was "anteverted." He gives no account of its condition in the other two cases, so far as flexion or version is concerned. Now, it is my belief that all three cases were alike; that there was, or had been, acute flexion in each case, and that the dilatation operation of Dr. Copeman effected good and removed the vomiting by reason of its also relieving the cramped condition of the cervix.

On the supposition (which I make as regards two, but which is a fact in one of the cases, according to Dr. Copeman) that there was flexion in all three, the os must have been far back, and, in order to dilate it, it must have been

pulled forwards. The dilatation would and must necessarily imply a righting of the os and lower segment of the uterus, and a consequent unbending of the organ; for I need hardly remark that to draw the os forwards would of necessity tend to tilt the fundus upwards. The uterus, as a whole, is on a pivot; direct pressure on or dragging on one extremity of it will affect the other extremity, and thus the process of dilatation, involving as it does the dragging of the os forwards, would practically aid in the placing of the whole organ in its proper position.

It is customary with obstetric authors to speak of the gravid uterus as being naturally anteverted in the first part of pregnancy. This is a statement which requires important qualification. There are degrees of anteversion. It is one thing for the body of the uterus to be rather easily felt by the touch through the anterior wall of the vagina, as it undoubtedly is in ordinary cases, but it is another for the roof of the vagina to be actually depressed by the abnormal descent of the enlarged body of the uterus when it is anteflexed. In the latter case, the os is always further back than usual, and, in marked cases, the body of the uterus is for the time completely jammed in the pelvis. It is under these circumstances that obstinate vomiting most commonly occurs. Retroflexion is equally operative in a quite analogous way; but I say nothing further on that subject at present, as it does not seem likely that either of Dr. Copeman's cases belonged to that category.

But it may be said, How do you explain the cases in which the vomiting persists as late as the eighth month, which was the fact in an acute flexion in the early part of the pregnancy; as the uterus enlarges (if abortion do not occur), the flexion is in most cases abolished, and the effect of this is, that the sickness generally disappears under such circumstances. But the tissues of the uterus at the seat of the flexion are sometimes left in a diseased state, being stiffened and unduly resistant, and thus the irritation is kept up.

Dr. Copeman's treatment would undoubtedly tend to remove this stiffening and constraint. He himself says, in his paper, "I wondered whether the relief to the vomiting so urgent and threatening to her life could have been effected by my having dilated the os uteri, and thus removed any undue tension which might be producing sympathetic irritation." Undoubtedly, there was undue tension; this tension was, I consider, situated at or near the internal os uteri, which is the situation of flexion under ordinary circumstances; and Dr. Copeman's procedure acted precisely in the way he conjectures. I submit to his careful judgment, and that of others accustomed to consider such problems, whether my explanation of the utility of his process is not the sound one.

I have been accustomed to treat cases of obstinate sickness in pregnancy by elevating the body of the uterus, and I have found that the same immediate good result follows as was observed in Dr. Copeman's cases: viz., the cessation of the sickness; but I am quite prepared to hear that traction of the os uteri forwards will produce a like effect. Both procedures have the same result; the liberation of the tissues of the uterus at the internal os uteri from their cramped compressed condition.

There are other details, but at present I forbear to say more on the subject. [*British Medical Journal.*

UNIVERSITY COLLEGE HOSPITAL.

We observe by recent exchanges that Mr. Erichsen, who has served as surgeon to University College Hospital for the past twenty-five years, has resigned that office. Mr. John Marshall becomes Senior Surgeon, and Mr. Christopher Heath takes charge of Mr. Erichsen's wards, and succeeds him as Holme Professor of Clinical Surgery. The wards lately under the charge of Sir Henry Thompson are assumed by Mr. Berkley Hill, who has, in addition, the surgical ward for children. A vacancy occurs, which is not yet filled, of Assistant Surgeon to the Hospital.

CANADA

Medical and Surgical Journal.

MONTREAL, JULY, 1875.

CITIZENS' PUBLIC HEALTH ASSOCIATION.

Recently an association with the professed object of improving the sanitary condition of the city of Montreal has been organized. It is composed of many of our leading citizens, and we trust that much good will arise out of its deliberations. There is great need of sanitary reform, and we fully expect that some definite scheme will be proposed to improve the assumed unhealthy condition of our city. If the association will earnestly enter into the work of reform, it will bring such pressure on the city authorities as to force them to adopt many needed sanitary improvements. There are many subjects of great moment to the sanitary weal of the citizens which should engage the attention of the Association. Very great good resulted a few years back by the earnest work of a similar association, whose hobby at that time was ventilation and cleanliness, in fact through the personal efforts of a few gentlemen who visited our citizens from house to house, ventilation and whitewash became the rage, which certainly improved the appearance if it did not the sanitary state of many a dingy suburban retreat.

We may remark *en passant* that our water supply is simply abominable. This we think should be a legitimate subject for the sanitary association to discuss. There does not exist in the enormously expensive machinery of our water works, any means of filtration. The citizens are supplied with water reeking with all kinds of animal and

vegetable refuse. If compelled to drink water, it is at least a satisfaction to see that it possesses the appearance of cleanliness, but to be supplied and forced to consume water which is in appearance as well as in verity filthy, is certainly anything but pleasant, and we do not wonder at the custom indulged in by many persons of mixing a drop of stuff with their water to correct it.

The waters of the Ottawa, which flow past our city, come down in a continuous stream several hundred miles from what is termed the height of land, receiving in its course the waters from tributary streams and rivers, so that it drains the entire valley of the Ottawa. In its course downwards it may be said to remove the refuse drainage and sewage of over half a million of people. We do not object to drink this water, although it is the common lavatory and sewer of this vast crowd, provided it is cleansed by filtration. People are probably not aware that at each ablution they strip from their bodies several ounces of its epithelial covering. This is in the form of an impalpable powder; it readily mixes with the water, is suspended in it, and can only be discovered by means of a high microscopic power. Of course we cannot see these scales with the naked eye; nevertheless they are there, and we swallow them and fatten on them, as nothing is lost which can be utilized by Nature. This is not pleasant to contemplate; it is disgusting, though not injurious. There are other substances, however, which are suspended in our water which are far less innocuous, and which give rise to disease and sometimes death.

This is a subject which can be discussed by the "Citizens' Public Health Association" with far greater advantage to the citizens than by silly and questionable remarks concerning our dirty back lanes. The water from our house taps is a kind of animal and vegetable compound, almost as thick as pea-soup, though not quite as savory; and the only means at the disposal of the tenant, with a view to improve its condition, is the use of a private filter. This is a luxury

enjoyed by the man of means ; the poor man is forced to drink the water as it is supplied, and thinks his water tax heavy enough without an additional tax for a filter. Hence as philanthropists and political economists, we should not only advocate but insist on the use of a public filter. It is a matter of fact based on observation, that the drinking water of Montreal is particularly noxious to strangers. Persons visiting our city, either on business or for pleasure, seldom get away without suffering from severe diarrhœa or cholera. It is by no means uncommon for these attacks to prove fatal. We need only to turn to our mortuary statistics to ascertain the fact that cholera, diarrhœa and dysentery are very often fatal during the heat of summer, and this principally amongst the floating population. The citizens themselves occasionally suffer though not in the same degree, as they become as it were accustomed to the impurities. But there are other diseases, equally dangerous to life, which may be produced by the impurity of our water supply—such as Typhoid fever, and the generation of the numerous family of entozoa, so commonly met with in children, and which are occasionally fatal. On looking over the work of Dr. T. Spencer Cobbold, on Helminthology, with reference more particularly to the internal parasites of man, the reader becomes horrified at the numerous forms, and injurious results of taking into our stomachs the ova or the young of various entozoa which live and generate within us.

These affections are known to be preventable, and with regard to cholera, diarrhœa and dysentery they arise frequently from some irritating material taken into the stomach, some substance which the body cannot utilize, and which is therefore cast out. Can we wonder at such a result, when we present as a beverage to our visitors a vile compound of human and animal excrement, fish spawn, vegetable refuse and germs of all sorts. Naturally the stomach rejects it, and what passes into the lower

tracts of the intestinal canal acts as an irritant and is thrown off. Why kill off our children by the host of bowel and other derangements induced by drinking these impurities? Our city parents do not like to assume the expense of a public filter, although we believe the expense would be trifling compared to the ultimate benefit to the fair name of the city. To this might aptly be applied the couplet:

"Kill a man's family, and he may brook it,
But keep your hands out of his breeches pocket."

"DOWN WITH THE DUST!"

So we cry inwardly when the parching simoon sweeps along our streets, searching every cavity of the face, down to the roots of each individual hair, and into every fold of our garments.—Cry inwardly we say, for who would venture to open his mouth as the excrement laden cloud pours upon him? Bleared and half closed eyes, gritty fingers, and discoloured pocket handkerchiefs testify to the ordeal to which we have been exposed when we "take our walks abroad." "Down with the dust!" we say again, this time aloud, when we have mopped away as much of the deposit as we can with a liberal allowance of the unfiltered element with which we are supplied, and which it does not do to examine with too critical an eye.

Unfortunately our City Fathers appear to be unable to come "down with the dust" in another sense, and exorcise the demon which torments us. Now that the Road Committee have resigned their scavengering functions to the Board of Health, who are supposed to have absolute power to appropriate "dust" for sanitary purposes we look for something decided. It is stated that all the watercarts are to muster and engage in the struggle. We sincerely hope it may be so.

The irritating nature of the dust in this city can be borne witness to by every resident. Perhaps the organ most exposed to its baneful influence is the eye, one of

the most delicate of the structures of the human body, and upon the integrity of which the bread of most of our fellow-citizens, depends. The dust laden with fine particles, many of them angular, makes its way beneath the lids, and by friction causes severe irritation. Irritation like this repeated every day for a period of three or four months in the year will surely bear fruit at last, in permanent weakening of the organ.

The delicate mucous membrane of the nose also suffers Such of us as can walk through the streets with our mouths firmly closed will not be likely to suffer so much from the inhalation of the powder, as children who do not know the danger, and who while at play almost constantly keep the mouth open. The dust, laden with deleterious material lodges on the sensitive mucous membrane of their air-passages, and causes in many instances much uneasiness and cough, while it cannot be doubted that it is a vehicle for numerous disease germs, which, lodging on the mucous membrane, find a suitable soil in which to germinate and multiply. Not only the germs of fever, but also those of entozoa may be thus disseminated, although for the latter we need scarcely look farther than our drinking water.

The breezes that we otherwise would hail as cooling and beneficial, we look upon with dread. May we not often see a puff of wind turning a corner, see it not in the sense that pigs are said to see the wind, but see it in its effects, the cloud of dust which it carries with it, gathering strength, (and dust), as it bears down upon us, until we fairly have to turn our backs to escape the murderous attack? Not only are we exposed to the limestone shower laden with its quota of disease germs, but we also come in for a share of finely divided animal excrement. We confess to a liking in a general way for the lower animals, and the odour of a cow-stable is reputed to be beneficial in some diseases, notably in consumption, but we have a decided objection to fæcal inhalations of the kind to which we are daily treated. As we belong to the

class which is habitually clad in sombre colored garments, we say nothing of the damage done to the more delicate fabrics for summer wear, by the searching and penetrating material which floats about in the atmosphere, but were we of the softer sex we think that we could make out a strong plea for pure air and less dust on that score alone.

In conclusion, we sincerely hope that the nuisance may soon be abated by the proper means at the command of the Sanitary authorities, and that we may before long hear Montreal spoken of as one of the cleanest, as it already is as one of the most prosperous cities on the American continent.

A SMALL POX HOSPITAL.

We publish below an excellent letter from the columns of the MONTREAL GAZETTE, and from the pen of Peter Redpath, Esq., President of the Montreal General Hospital. Coming from such a source we trust it will have due weight in the City Council. Mr. Redpath shows clearly the absurdity, we might say the insanity, on the part of the city authorities in attempting to shove off the responsibility of establishing a small-pox hospital.

The emergency has to be grappled with, and if we as a city, honestly desire to improve our sanitary condition, as touching infectious diseases, we must assume without further delay all reasonable responsibility in the premises. This may be attended with considerable outlay which must be met, and if need be, by a special tax for hospital purposes. We cannot but express surprise that a return to the scheme of having two separate hospitals should have been mooted. A hospital for the purpose of aiding in stamping out a highly infectious disease ought to be under the government of the municipal body. It is the Corporation of the city to whom the citizens look for the enforcement of rules and regulations which are deemed advisable for the general welfare of the community.

representatives of the citizens are unwilling to carry out necessary sanitary measures, the government of the country should be memorialized to step in and do the work or have it done at the cost and charges of the city. We should suppose the Provincial Legislature has this power, and if the citizens of Montreal cannot succeed in obtaining from the city council common-sense views on this important subject they had better at once ignore the very existence of mayor and aldermen and go to a higher power for redress.

In the last number of our journal we copied from a Boston paper a statement to the effect that during the year ending 1st May, 1875, no case of small-pox had been recorded as occurring in the city of Boston, which was the first occasion that such a statement could be made for the past twenty years. On reference to the report of the Trustees of the City Hospital, Boston, for the year 1873—an institution which is supported at an annual cost of over $100,000 by the city authorities of Boston—it will be found that from April to August of that year, during an epidemic of small-pox, there was disbursed for the maintenance of the small-pox hospital $10,219.93. Who will in all honesty say that that amount was not well spent when it resulted in the proud announcement a few months later that "not a single case of small-pox was recorded as occurring in the city during the past twelve months?"

SMALL-POX HOSPITALS.

To the Editor of the Gazette:

DEAR SIR,—Public attention has been drawn to the necessity for increased accommodation for small-pox patients, but nothing permanent has been done to meet the emergency, apparently because of uncertainty as to the best course to pursue.

The City Council has offered to the ladies of the Hotel Dieu and to the Montreal General Hospital the sum of $25,000 each, with the conditions of their erecting isolated

buildings for the purpose, with provision in each for fifty patients at a time, and that they should respectively assume the whole cost of subsequent maintenance.

With the view of helping to avoid mistakes in accomplishing the object, I venture to express the opinion that even if this proposition be accepted and acted upon by those to whom it is addressed, the end will not be adequately attained.

The number of small-pox cases existing at one time during the last two or three winters must, I think, have been much more than one hundred, and if, as I believe, it be intended to remove all cases to the hospitals, the responsibility of providing for the excess over one hundred would still rest with the City Council.

Among many considerations which the question involves, I respectfully submit:—

1st. That the best authorities on the construction of hospitals maintain that the ground upon which an hospital is erected should afford an area of not less than about five hundred and forty square feet to each patient. Assuming that more is not required for infectious diseases, a building adapted for fifty patients should stand on an area of about twenty-seven thousand square feet. I am strongly of opinion that justice would not be done either to the patients or to the community if a more limited site were chosen.

2nd. The cubical air space provided for each patient should certainly not be less than fifteen hundred feet; two thousand feet would be much better. This estimate demands from seventy-five thousand to one hundred thousand cubic feet of ward accommodation for fifty patients. The offices, service, and administration would probably require at least half as much more, which is a smaller proportion than the space applied to these purposes in an ordinary hospital.

3. The heating and ventilating arrangements should be on the best possible plans, especially as the resources of the hospital would be most taxed during the winter.

It is obvious that if a building were constructed on the

basis of the requirements I have stated, in the most economical manner that could be devised, it would absorb a large proportion, if not the whole, of the proposed grant, leaving nothing for the cost of ground or for subsequent maintenance. The possibility of a future demand for additional help must, therefore, enter into your calculation.

I have no possible knowledge on the subject, but I have the impression that hospitals for infectious diseases are usually controlled by the municipal authorities. I observe in a newspaper accidentally beside me, an advertisement in which the Sanitary committee of the City Council of Halifax, N.S., asks for tenders for the erection there of an hospital for contagious diseases. I can readily understand why the duty should be distasteful to the City Council, but it is not the less a duty. You have made an experiment and found it an expensive one, but it has been made under circumstances which did not allow time for economical arrangements. There is no good reason why an hospital for small-pox patients should not be carried on as economically by the City Council as by any other corporation. The responsibility of it should rest with those who by a vigorous and judicious administration of their own laws, can greatly diminish, if not entirely extirpate the disease, existence of which is attended with such great expense as well as such danger to the citizens.

I believe that a civic hospital constructed on a suitable site, and on principles which I have partly indicated, would best meet the requirements of the case, and would before long be regarded with favor by the whole community.

I am, dear Sir,

Yours, very truly,

PETER REDPATH.

Montreal, 17th June, 1875.

BOWKER VS. BEERS FOR LIBEL.

This case has occupied the attention of the Courts for some years past, and is we believe finally settled before the Court of Appeal.

It arose out of an article from the pen of Mr. Bowker, in which that gentleman condemned the use of amalgam and mercury paste for filling teeth. This article we published in our Journal in the number for January, 1870, being the sixth vol. Canada Medical Journal. Mr. Beers replied in an article to which we gave insertion in the following No. for April. Subsequently Mr. Beers published in his own Journal, "The Canada Journal of Dental Science," an article in which he accused Mr. Bowker of making use of the amalgam of mercury, in his own practice, for the filling of teeth; and out of this accusation arose the action in question. In the course of the trial very conflicting evidence was given touching the question of the possible injury to be done by the use of amalgam paste for filling the cavities in carious teeth. This was a side issue raised by the defendant, and had nothing whatever to do with the question before the Court, a ruling which is evidenced in the judgment which we give below, taken from the GAZETTE:

COURT OF APPEALS—JUDGMENT.

Present: Chief Justice DORION, and Justices MONK, TASCHEREAU, RAMSAY and SANBORN.

W. G. Beers (defendant in Court below), Appellant, and H. M. Bowker (plaintiff below), Respondent.

TASCHEREAU, J., dissenting.—The respondent sued the appellant for libel contained in an article published in the *Canada Journal of Dental Science.* The article in question charged the respondent with having used professionally as a dentist a certain amalgam mineral paste for filling teeth. The plea of Beers was that Bowker had previously in an article published by him in the *Canada Medical Journal,* stated that the use of amalgam, a pernicious compound, was encouraged by the Dental Association of Quebec, of which Beers was a member. I would reverse the judgment

which condemned Beers to pay $10 damages, and put the parties out of Court, leaving each to pay his own costs.

DORION, C. J.—We have not to decide whether the amalgam was pernicious or not. The question is whether Beers did not libel Bowker in accusing him of using a substance which the latter had asserted to be injurious. The charge of using it is not proved, and under the circumstances there would be an injustice in putting the parties out of Court. The judgment must be confirmed.

RAMSAY, J.—Dr. Bowker is a very fortunate litigant, because by writing in a very lively style he laid himself open to an answer. But the answer was too severe, for it made out that Bowker was using a substance which, by his own confession, was an injurious poison, to fill teeth with. Bowker had to defend himself from this charge. There was no plea of compensation fyled, only one of provocation. But the Court says: You went further than the provocation; we have not to weigh two injuries; therefore, we have to say that some damages are due. The Court has fixed the damages at $10, and I think that is enough, considering the excessive sharpness of Dr. Bowker's article on a scientific question and one of great nicety.

SANBORN, J.—I don't see any question of compensation here at all: Bowker's charge was against a body of men, not against an individual. If you accused all Irishmen of being mad, an individual could not bring an action for that. Beers answered by a charge that amounted to this: that Bowker was an impostor because he was guilty of using the very same poisonous amalgam that he had condemned; that was the real gist of the charge. Every one knows that there is a good deal of disputing between gentlemen connected with the healing art, probably because there are no umpires in that profession. In the legal profession there are the judges to decide, and they become the objects of criticism.

Judgment confirmed, Taschereau, J. dissenting.

Messrs. Carter & Keller for the appellant and Mercer-son for the respondent.

PUBLIC HEALTH MAGAZINE.

We have received the first number of a magazine, with the above title, a periodical which is destined, we hope, to do much good in the community. Its mission is educational, and if conducted in a proper spirit so as to call the attention of the masses to all subjects bearing on the laws of health, we doubt not that it will be a success, and take rank as "an authority" in Sanitary science to which it aspires.

This journal is edited by Dr. George A. Baynes, a gentle man who has already given evidence of his devotion to Sanitary subjects by a very excellent course of popular lectures delivered by him during the past winter, as also by a brochure on the disposal of the dead, which is worth reading. We wish the periodical every success ; it is very neatly gotten up, and is issued from the printing establishment of John Dougall & Son.

MEDICAL OFFICERS IN THE MERCANTILE MARINE.

We notice that a return has been made to the British House of Commons on the motion of Captain Bedford Pim, of the names, ages and nationalities of persons who have served, during the past two years, as surgeons in the merchant service. The number returned was 224, none of whom were registered in the United Kingdom. We suppose that some of these gentlemen are Canadians as it is customary for the owners of Canadian steamships to occasionally appoint a young Canadian Physician and Surgeon to fill the post. We may state that one of the necessary requirements for that position is that the applicant must be registered in the Province from whence he hails—and in fact no appointment is made without the recommendation of the heads of some of our educational bodies, The owners are particularly careful in the selection of Surgeons, more especially in passenger ships, and we have no hesitation in saying that those surgeons from Canada to be met with in any of our Canadian lines of steamships are thoroughly qualified were and are registered
own province,

CANADA

MEDICAL & SURGICAL JOURNAL.

ORIGINAL COMMUNICATIONS.

Case of Scarlatina miliaris. By Wm. Osler, M.D., Prof. Institutes of Medicine, McGill College.

C. S., æt. 9, had been convalescent for over two weeks from a moderately severe attack of small-pox, and was only remaining in hospital on account of two ulcers in the leg. During the night of the 30th of June she sat up with the nurse till 4 A.M. watching a dying child, and as on getting up at 7 A.M. she complained of a few pains in her back, and looked very pale and unwell the nurse sent her back to bed. She was not sick at the stomach, nor had she any shiverings. Up to this time she had been doing very well, and no change had been noticed in her health. About 9 A.M., the nurse observed that she had become of a bright scarlet color. At the visit, at 4.45 P.M., there was intense hyperæmia of the skin, the whole surface being of a brilliant red colour, and on touching gave the impression of pungent heat. The redness was diffuse and uniform, only here and there, on close examination, a punctiform character was observed.

Throat not sore; tongue thickly coated; pulse 140; temp. 101.

July 2nd. 8.45 A.M. Had a tolerable night. Pulse 136; temp. 104. Tongue coated. Eruption remains, being even more intense, and some additional features of interest added. Thickly scattered over the whole trunk, upper extremities and thighs, are small miliary vesicles about the size of No. 4 shot, tolerably firm to the touch, and filled with a yellowish creamy fluid. Over the nape of the neck and back they are so closely set that hardly any

intervening skin can be seen. On the dark brown cicatrices left by the varioles they exist in groups. On the arms they are not so numerous, but on the extensor surfaces, especially about the elbowjoint some of them have coalesced to form large bullæ, which are filled with the same yellowish-white matter. Only a few of the vesicles are evident on the legs, but on close inspection small, clear, subcuticular papules are seen, like the vesicles in an early stage of development. Legs and feet are somewhat swollen.

5.30. P.M.—Pulse 148; temp. 102.4. Tongue very much coated. Bowels opened once freely. Feels heavy and is not disposed to take much nourishment. Face suffused, but general redness not quite so marked. Vesicles on back and chest appear firmer to the touch, and on squeezing a portion of skin their contents do not flow out so readily. They also exist in numbers over the scalp, and are very thick on the forehead along a narrow strip just at the roots of the hair. Only a few are present on the face, and these are larger and more of the nature of bullæ. On the trunk and thighs they are most numerous, and on passing the finger over the skin in these regions the sensation of closely set fine papules is experienced.

The legs are œdematous, bright red in colour, and—especially about the small ulcers, which have now scabbed over—have a glistening aspect. Fauces and pharynx look quite natural, and are not at all congested. Urine normal in quantity, not very deep in colour. Sp. gr. 1015. Examination of the contents of the vesicles show them to be made up entirely of pus corpuscles, mixed with a considerable quantity of granular matter.

3rd.—8.30 A.M. Pulse 128; temp. 99.4. Tongue has lost its white coating and is now of a dark red colour, somewhat swollen and with papillæ prominent. She had a very good night and made a fair breakfast this morning. General redness still evident Vesicles drying and disappearing on the chest. None have appeared on the legs, which are much less swollen to-day. Back and thighs very rough to the

touch from the partly desicated vessels, feeling like pig-skin or exaggerated *cutis anserina*. General symptoms good. Urine abundant, pale, and contains no albumen.

5.30 P.M.—Pulse 120 ; temp. 99. Tongue a little dry, dark in colour and studded with swollen papillæ. Rash fading on chest and extremities, still very intense upon the back. Some of the miliary vesicles have burst and disappeared from the trunk, leaving the skin roughened in parts. Several large ones exist now on the backs of the hands, which are filled with a purulent fluid, and similar ones, though larger, still remain upon the extensor surfaces of the arms. Feet and ankles have lost their glistening appearance and are not so much swollen. A few vesicles have come out upon the legs. Over the whole scalp the vesicles have uniformly coalesced, and the contents form a thin layer of purulent matter,—a miniature of what is sometimes seen in bad cases of confluent small-pox. Pain complained of in the back of the neck, a region where the vesicles were most abundant, and in drying have left it hard, rough and painful. General symptoms continue good ; bowels opened twice ; urine contains no albumen. Sp. gr. 1012.

4th. 10, A.M.—Had a good night ; pulse 100 ; temp. 98.2 ; tongue moist, brighter in colour, and papillæ not so prominent. Throat natural. Skin still hyperæmic, especially about the back. Desquamation of fine, small crusts and thin scales beginning on the chest. On the back of the neck and about the axilla, the crusts are semi-detached and can be readily picked off. Back and abdomen still rough and granular, and on close inspection the dried remnant of each little vesicle can be seen. A few purulent bullæ still persist about the hands and legs. Urine pale in colour ; normal in quantity. Sp. gr. 1011. No albumen.

6.30 P.M.—Pulse 96 ; temp. 98.2. Tongue clean. Rash disappearing and desquamation progressing. Says she feels quite well.

5th, 9.30. A.M.—Pulse 88 ; temp. 98.2. Back covered with scales and fine crusts, which are rapidly becoming detatched

and falling off. On the limb the scales are smaller, thinner and more furfuraceous. 6, P.M. Pulse 84 ; temp. 98.3.

6th,—Pulse 92 ; temp. 98. Desquamation proceeding rapidly, crusts almost all off the back and neck. Appetite good.

7th.—Pulse and temperature normal. Thin flakes of epidermis are peeling off the arms and legs. On the trunk the scales are smaller but exceedingly abundant. The back is still very rough and covered with small, fine scales. Urine natural.

8th.—Desquamation beginning on the face, and crusts can easily be picked away from the roots of the hair.

Appetite good ; asked for meat.

9th.—Feet and legs covered with membranous flakes. Body quite clean.

12th—Desquamation nearly completed. Urine abundant, pale. Sp. gr. 1010. No albumen. Microscopical examination negative.

16th—Had a bath which has removed the rest of the scales. Several small pustules — Acne — have appeared about the face.

20th.—Quite well ; ordered to be discharged.

Remarks.—A local eruption of miliary vesicles occurring in Scarlet fever is not uncommon enough to demand notice, but such a plentiful crop as was present in this case is rarely met with, even in epidemics characterized by this peculiarity. The pustular nature of the contents of the vesicles, from the first, their curious confluence on the scalp, and the existence of pemphigus-like blebs on the limbs, brings the case into the category of those described as Scarlatina pustulosa.

Not a little confusion would appear to exist as to the forms of Miliaria, and their relations to Sudamia, Hebra. Neuman and other German authors describe three forms : *rubra, alba, crysalina,* of which the two former constitute Sudamia, while the latter is regarded as Miliaria proper. Again miliary vesicles, as described by the above authors,

contain a watery, transparent fluid, of a feebly alkaline or neutral reaction, the contents of which never became pustular. In English works they are spoken of as cloudy, turbid and purulent from the comencement. Sudamia, according to the latter, are clear, transparent vesicles produced by sweating; Miliaria are turbid and purulent, not necessarily produced by sweating, but occurring often at the height of a febrile affection. These miliary vesicles correspond to Hebra's M. alba, which he reckons as Sudamia. Fox strikes at the root of the matter when he calls Miliaria inflamed Sudamina. There can be no doubt that, given suitable conditions—active hyperæmia of the skin with consequent augmented temperature and increased supply of pabulum—the minute particles of protoplasm, which exist in the fluid of almost all vesicles, would develop into pus corpuscles, just as they can be made to do outside the body in the serum from a blister.

In this case the vesicles appear to have developed independently of any sweating, and to have been pustular from the outset. The first morning they were noticed, I looked carefully for any trace of clear vesicles, but about the trunk none could be detected. On the legs, however, certain clear, sub-cuticular papules did exist, which from some cause or other did not develop, but it may have been—probably was—in this way that the Miliaria originated.

Quite an exceptional feature in this case, and one very rarely observed, was the entire absence of any affection of the throat. I examined her carefully, twice every day in a good light, and not even a trace of congestion was seen from first to last.

An interesting question arises: where are we to look for the source of infection? The small-pox department is separated by a considerable interval from the general wards as well as from the houses about, in both of which places scarlatina is rife. If we are to suppose the Scarlatina poison to withstand dilution to such a degree that it remains active after passing through the wide space which

separates the Small-pox hospital from the neighboring buildings, can we attribute a minor degree of vitality to the small-pox germs which must be wafted out of the ventilating shafts in countless numbers to be distributed in the neighborhood ? Experience has taught us that we cannot.

Another, and perhaps more likely, source of infection must not be overlooked. On the 11th and 12th ult., I attended for a *confrere* a case of Scarlet fever in the immediate vicinity of the hospital, and on the evening of the 12th I went direct from the house to the hospital. At this period she was almost convalescent. The stage of incubation is so variously placed by different authors, ranging from three days to a month or more, that this may have been an instance of prolongation of the period of latency. With an impoverished condition of blood the Scarlet fever poison may not have met with sufficient quantity of that "mysterious something," different for each exanthem, upon which the germs are supposed to live, grow, and at last, happily, exhaust; and hence a lengthened period of incubation, with retardation of the eruption.

Case of Multilocular Ovarian Tumour.—Removal.—New Method of Ligaturing the Pedicle. By JOHN BELL, A.M., M.D.

On the 14th of June, I was requested by Madame M. to see her daughter who was suffering from a tumour in the abdomen. I saw her the next day, and diagnosed the tumour to be ovarian and cystic in its nature and recommended its removal.

The patient, a French Canadian, recently came up with her family from Rivière du Loup, *en bas*. She is 21 years of age, single, of medium height, of well-developed figure and frame, with pale or rather sallow skin. Until the last few days she had been able to walk about with comparative comfort, but now she spends most of the time lying down. Her appetite has been habitually poor, and there were but

few articles that she relished. Has suffered occasionally from vomiting. Her urine is not albuminous.

At the request of the patient and family, Dr. G. W. Campbell kindly saw her in consultation with me on the 16th. After examination of the tumour he pronounced it to be of the above character and probably unilocular from its globular form. Considering the extreme distension of the walls of the cyst, and the near approach of the hot summer weather, together with the otherwise favorable nature of the case, he advised its removal without unnecessary delay.

The dangers of the operation and probabilities of success were fairly stated to the patient, and after a week's consideration she consented to have the tumour removed on Saturday the 26th June as Dr. Campbell was going out of town for his summer vacation in the beginning of the following week, and she was anxious to have him present at the operation.

On the 23rd Dr. Ross saw the patient with me and a careful examination of the tumour was made. The circumference of the abdomen at the umbilicus measured 39 inches. A line from the ensiform cartilage to the umbilicus measured 7½ inches ; umbilicus to pubic crest 7 inches ; from umbilicus to right sup. spine ilii, 8½ inches ; umbilicus to left sup. spine ilii 9 inches. The outer side of the hips were marked by numerous *lineæ albicantes*, but there were none on the abdomen. The tumour is firm and globular, being slightly more protuberant on the right side, and rests across the brim of the pelvic canal, not descending into it. The cervix uteri is normal in size and position or perhaps a little higher in the pelvis than normal, and the sound shows the uterus to be of normal size, but with the fundus thrown somewhat to the left. The uterus is more fixed than usual and can be moved farther to the right than the left side, from which it is surmised that the tumour is one of the right ovary. Fluctuation was indistinct in every part of the tumour but most perceptible on the right side, which

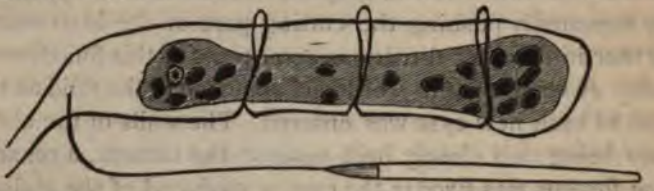
Dr. Ross thought was due to the density of the cyst fluid and the presence of a large cyst on the right, with a mass of smaller cysts on the left or flatter side of the abdomen. Percussion showed the intestines to be displaced chiefly to the left side, and the liver considerably upwards, the colon being resonant throughout. The anterior abdominal wall was freely movable over the surface of the tumour conveying a leathery creaking sensation to the hand. The diagnosis was therefore that the the tumour was unattached by adhesions, multilocular and of the right ovary; the cysts containing dense fluid and one on the right side being much larger than the others.

The tumour was first noticed in December last (1874) as a small lump in the right inguinal region. It never caused any pain or discomfort except what arose latterly from its size and weight. The patient has never enjoyed very robust health, but there is nothing peculiar in the history of the case that might point to the origin of the degeneration. Menstruation was at first regular; it then became suppressed for three months and has lately taken place every two weeks.

June 26th. Operation at 11 A.M., in an airy room on the third flat of the patient's home, which is situated in a healthful locality, with numerous trees in the gardens and yards around. Present, Drs. G. W. Campbell, Hingston, Fenwick, Carlyle of Toronto, Craig, Ross, Roddick, Patton, Cameron and Mr. Stafford. Dr. Cameron of the General Hospital kindly gave chloroform, and continued the anæsthesia with ether, of which about a pound was used. She took the anæsthetic well, although at times she became rather weak. The bladder having been emptied with a catheter, an incision of four inches in length was made, in the median line through the skin, a thick layer of fat and the subjacent tissues down to the tumour whose walls were thick, tense and marked with very large veins. On introducing the hand which was done with difficulty, no adhesions were found, and the fundus uteri could be felt to the front

and left side of the tumour whose pedicle was tightly drawn across its front surface and attached to its right side, thus causing the pedicle to be long and thin. The tumour had evidently been rotated by the filling of the larger cysts changing its shape. The patient was turned on her right side, with the pelvis facing downwards, and one of the Spencer Wells' large Canula Trocars, with rubber tube attached, was introduced into the tumour. Only a small quantity of thick, viscid, greyish, flocculent fluid appeared. By repeatedly pushing the cutting part of the instrument, further in different directions some pints of this fluid flowed out. A small quantity of blood appeared in the fluid as the wall of each new cyst was entered. The walls of the abdomen being now closely held against the tumour, a tenaculum forceps was fixed in the cyst at each end of the abdominal wound, and an incision made between them into the tumour. The incision was carried through a considerable thickness of small cells before the larger cyst at the right was reached. The hand was now introduced to break up the remaining cysts, some of which protruded into the cavity vacated, and seemed to be arranged concentrically inside one another. All the cysts contained the same kind of fluid, and as it gradually poured out the sac was gently drawn down until the mass passed out through the wound. The pedicle was long, thin, and about three inches broad, the lower border containing a number of enlarged vessels.

A ligature of Prof. Lister's No. 3, carbolized catgut doubled, was applied about midway between the tumour and the uterus, in the following manner, which is like the ordinary lock-stitch of a sewing machine. The double catgut was drawn through the eye of an aneurism needle to near the middle of the ligature. The blunt point of the needle was passed through the pedicle, about three quarters of an inch from its lower border, and then withdrawn along the longer end of the ligature, leaving a loop of the catgut on the opposite side. The shorter end of the ligature was brought round and passed through this, and the loops sub-

sequently made. The aneurism needle, still armed with the longer end of the ligature, was again passed through the pedicle about ¾ of an inch from the first loop and again withdrawn along the longer end of the ligature, leaving a second loop, through which the shorter end of the ligature was continued. In the same manner a third loop was made and the needle slipped off the ligature, whose ends were now tightly drawn and tied over the upper border of the pedicle. By this method the four divisions of the pedicle

were not only tightly ligatured individually, but were also so forcibly pressed together collectively, that, had any of the vessels been wounded in passing the needle through, all risk of bleeding from the punctures was removed. The ends of the ligature were again tied round the whole circumference of the pedicle, folding it up in its grasp. The pedicle was severed close to the ligature, as there was no danger of the latter slipping. The gaping ends of the enlarged vessels showed no sign of bleeding. One of the largest arteries was, however, secured with fine catgut in the end of the stump as a matter of precaution, and the ends of the ligature cut off short. The circumference of the pedicle compressed by the ligature was not greater than one's thumb. The now retracted uterine end of the pedicle was dropped into the abdomen, and a very small quantity of coloured fluid, brought to the wound by pressing the abdominal walls, was removed with a carbolized sponge. The left ovary was healthy. The wound was closed by four deep carbolized catgut sutures, each including about half an inch of peritoneum on either side of the incision. Superficial sutures of smaller catgut, between the deeper ones, completed the perfect co-aptation of the edges

of the incision. The wound was dressed with dry cotton wool, previously prepared by pressing it out of an alcoholic solution of carbolic acid, with a broad flannel bandage encircling the body.

On being removed to bed she was restless for a while, eructating occasionally from the effect of the ether, and when awake she expressed herself as "mal, mais pas de douleur." A teaspoonful of brandy and water was given her, but it caused pain to swallow. In half an hour 30 drops each of laudanum, and solution of morphia, were given as an enema,and almost immediately she fell asleep for an hour. After being awake for a short time she again fell asleep, and had been sleeping soundly, on her right side, for some time before I left at 3. 15, P.M.

26th, P.M.—Pulse 124; Temperature, 102.3. Patient slept for some time after I left. Had taken some beef-tea, but had vomited, or eructated it several times. Gave five drops of chlorodyne (Browne's) in a little brandy and lime water. To be repeated if required.

12 P.M., (Midnight). Pulse, 132; Resp. 31; Temperature, 102. Had vomited a mouthful of beef-tea twice. Slept several times. Some eructation. Perspiring freely. Talks and laughs. Has no pain; feels "bien, mais faible." Takes ice, milk, limewater and brandy in small quantities. 8 oz. dark urine of slightly ammoniacal odour removed by catheter.

27th. 10.30 A.M.—Pulse, 120; Resp. 40; Temperature, 101.7. Slept nearly all night in short intervals. Perspired freely. Vomited three times, the last bilious. Tongue clean. No tympanites. No headache. Pupils slightly contracted, as she had taken 25 drops of chlorodyne since the operation. Has had altogether about a tumblerful of milk, beef-tea and limewater, with three teaspoonsful of brandy since last visit. 6 oz. dark urine, of a normal odour, removed. To have champagne in small quantities.

6 P.M. Pulse, 132; Resp. 40; Temp. 103.3. Has not vomited since. Perspired. Feels occasional "coups de

douleur " in the wound. Has slight sore throat. To have m j Fleming's Tr. Aconite every hour, until further orders, with spirits and water to moisten the head, as the weather has been very warm and " close,"—the temperature in the shade being 84, Fahr. Her urine was removed regularly three times a day, and measured from 4 to 6 ounces each time.

12, P.M.—Pulse, 120; Resp. 35; Temperature 102. The head to be sponged with spirits and water, as she finds the warm still air very oppressive.

28th, 8.30 A.M.—Pulse, 118; Resp. 35; Temp. 102.7. Slept nearly all night—awaking only at intervals. No pain. Pupils slightly contracted. Vomited twice. Abdomen commencing to be tympanitic. 6 oz. dark urine, of normal odour. Examined the wound and found the dressing dry and only stained along the line of the incision, which is apparently perfectly healed throughout. To continue aconite and be sponged occasionally.

6, P.M. Pulse, 114; Resp. 30; Temp. 102.7. Has passed a small quantity of flatus per anum three times. Vomited (five times, rather freely—ejected matter coloured with bile.) Has occasional shooting pain in belly. Face flushed Pupils normal.

11. P.M.—Pulse 124; Temp. 102.8. Dr. Gardner saw her with me at this visit. Vomited a little. Considerably more tympanites. 4 oz. dark urine. On introducing the finger per anum, the rectum was felt above distended with wind, which seemed to be retained by a flexion of the bowel. Given enema Tr. Opii 3j. Essent. menth. pip. 3 ss; aq. 3ij. To be sponged every three hours.

29th, (Tuesday) 9 a.m.—Pulse, 114; Resp. 25; Temp. 102.3. Slept from 12.30, and from that to 5 without interruption, Feels refreshed and " bien " without qualification. 6 oz. urine.

11, P.M.—Pulse, 128; Resp. 26; Temperature. 103. Dr. Fenwick saw the patient with me at this visit. Face flushed. Sore throat gone. Slight sanious discharge from

the lower end of the wound. Two broad strips of plaster a yard in length, were applied across the wound, and around the body for support, in addition to the cotton and flannel. 5 oz. of urine.

6 P.M.—Pulse, 140; Respirations, 29; Temp. 102.7. Vomited twice. Pupils somewhat contracted.

11, P.M.—Word was sent that patient was worse, as her hands were cold. Dr. Fenwick kindly accompanied me, as I feared lest hæmorrhage might be taking place. The patient was found to be warm, of good colour and perspiring freely, so that the breeze through the rooms had cooled her hands, which were however of good color. Pulse, 140; Respirations, 28; Temperature, 104.4. Has no pain Tympanites moderate. Urine nearly 4 oz. To continue chicken broth with brandy and water as she finds these agree best with her. Gave as an enema a small teaspoonful of laudanum with ess. peppermint and water.

30th, [Wednesday].—During the night she slept and waked at intervals, with mild delirium, imagining she was driving in a carriage, or that it snowed, &c. She died at 5.30 A.M., quietly, as her friends expressed it, "like the going out of a candle."

Post mortem examination 12 hours after death.

Rigor mortis well marked, Surface pale. Abdomen moderately distended with flatus. A sanious discharge could be pressed from the wound in places. Sutures still holding firmly. The whole anterior abdominal wall was reflected by two incisions; one across the lower part of the abdomen, and another at right angles to its right extremity, thus exposing the wound in the peritoneum without disturbing the sutures. The edges of the peritoneum were well and evenly brought together, although one of the sutures should have been drawn a little tighter. The edges of the wound were united throughout their entire extent, with the exception of a channel at its lower end, and small areas here and there which were moistened with a sanious fluid. The intestines were distended with gas, and the sulci and angles

between them everywhere contained firm, pale-yellow lymph. The peritoneum was not congested. There was a small quantity [4 oz.] of reddish-grey, semi-transparent serum in the belly. On pushing aside the intestines lymph was found deposited over the peritoneum, especially in the neighbourhood of the ligated pedicle, which was resting on the brim of the pelvis, The stump in retracting had drawn the firmly tied ligature into a hollow which was so completely filled in with firm lymph, that only a part of one of the knots could be seen. Dr. Fenwick has had a wood-cut of this part prepared from a drawing by my friend Dr. Arthur A. Browne, which shows the masses of lymph raised to give a view of the ligatures. The ligature had not moved in the least degree, nor had a drop of blood passed it.

Notes of examination of tumour, by Dr. Cameron.

Tumour symmetrical in form, an elliptical space denuded of peritoneum (which has retracted) marks the line of attachment of the pedicle. No signs of adhesions. The veins running across the tumour are very large. The walls of the tumour are composed of multiple cysts, from the size of a pea to that of an orange. These small cysts in the walls are most numerous in the right half of the tumour. The walls are in some places very thin. The body of the tumour consisted of four large cysts; the two largest were on the right and were evacuated during the operation. The longest *circumference* of the tumour is 24½ inches; the shortest 18½ inches. The longest *diameter* is 9¼ inches. The shortest, 6½ inches.

1. Beaver Hall Terrace.
July 23rd, 1875.

Hospital Reports.

MEDICAL AND SURGICAL CASES OCCURRING IN THE PRACTICE OF THE MONTREAL GENERAL HOSPITAL.

CASES UNDER THE CARE OF DR. D. C. MACCALLUM.—Reported by JAS. C. CAMERON, M.D., House Surgeon, Montreal General Hospital.

From the numerous carefully reported cases of Dr. MacCallum's Ward Clerks, I have arranged the following brief notes :

Case 1—*Colica Pictonum.*—Reported by Mr. C. S. Stroud.

J. B., æt. 41 years, was admitted into Dr. MacCallum's wards June 4, 1875, complaining of constipation and severe abdominal pains. Patient has always been a strong healthy man of sober industrious habits ; has never worked among paints or lead. He states that for three weeks previous to admission, he has been in the habit of indulging very freely in some excellent-tasting cider, sold by a certain saloon-keeper in the Eastern part of the city. He used to take sometimes as many as fifteen glasses a day. One week after he had begun to drink the cider so freely, he complained of griping pains in the abdomen, followed shortly by nausea and loss of appetite, and by irregular alternations of fever and cold clammy perspirations. His bowels became constipated, the fœces being scanty, dry, hard and of a dark color. His gums became swollen and tender, he complained of a peculiar taste in his mouth, and was troubled with frequent epistaxis.

Upon admisssion the blue line around the edges of the gums was very well marked, the expression of countenance anxious, the skin dull, dirty and cadaverous, the abdomen considerably contracted. He suffered from pain in the back, retraction of the abdomen, and twisting or grinding pains of great severity around the navel. After the administration of several purgatives, his bowels were freely opened,

and on the 7th, he was put upon five grain doses of the Iodide of Potassium, three times daily. The symptoms gradually disappearcd, so that on the 14th he was discharged from Hospital. His urine was examined by Dr. Girdwood, but no trace of lead could be discovered. Upon enquiring into the cause of the lead poisoning, it was ascertained that the cider was pumped up through a *leaden pipe.* Several of his companions who partook of the same cider complained of similar symptoms; one of them who came to visit the patient had also a well-marked blue line around the gums, but the other symtoms were not so urgent, for he had drunk much less of the cider.

Case 2—Aortic Vulvular Disease..—The notes of this case were taken by Mr. R. McDONNELL.

J. L.. æt. 40., was admitted into Dr. McCallum's wards May 30, 1875, suffering from palpitation and great dyspnoea. The patient was treated in the Autumn of 1873 by Drs. Wright and Ross for *Double Aneurism, Popliteal* in the *left* leg, and *femora-popliteal* in the *right.* After the failure of Digital Compression and Flexion, instrumental compression was tried as a *dernier resort;* Carte's and Skey's tourniquets were applied and the man instructed how to manage them himself. Eventually the instrumental compression was successful and both aneurisms were completely cured. The full report of the case can be seen in the number of the CANADA MEDICAL AND SURGICAL JOURNAL for January, 1874. Since he was discharged from the hospital in 1874 he has been employed in a warehouse. Soon after commencing work he began to feel severe, paroxysmal pains in the lumbar region, accompanied by unusual pulsation of the arteries, especially the Abdominal Aorta. Severe cramp and spasmodic contraction of the lower extremities were occasionally felt. During the winter he was unable to do any hard work, or to remain out of doors on a very cold day. His appetite has been decreasing, and he has lost weight rapidly. On admission his expression was anxious,

extremities livid, tongue dry and coated with a white fur. pulse, 80; hard, strong and inelastic. He complains of great dyspnoea: his most comfortable position is on the right side with the knees drawn up. The pulsations of the superficial arteries on each side of the body are quite synchronous. The heart's action is violent; the apex beat is displaced somewhat downwards and outwards. The area of cardiac dullness is increased one inch to the left side. Auscultation reveals the physical signs of obstructive and regurgitant aortic disease. At the base of the heart a loud double bellows murmur is heard; the systolic bruit being propagated up the aorta to the carotids, while the diastolic is transmitted downwards to the ensiform cartilage. This latter phenomenon is due, as was first pointed out by Dr. MacCallum, to the propagation of the sound, produced by the regurgitating blood at the patent aortic orifice down along the septum ventriculorum to the right apex.

Both murmurs can be heard somewhat indistinctly behind, at the lower angle of the left scapula. No signs of abdominal aneurism could be made out. Femoral artery at the seat of the old aneurism, feels like a hard thick cord, while the popliteal enlargement is barely perceptible. He was put on a mixture of digitalis and iron, and improved so much that he was allowed to leave the hospital on the 6th of June. About a week afterwards while working for the Corporation on Mountain street, he suddenly dropped dead. A Coroner's inquest was held, and a verdict of "Died from Disease of the Heart" was returned. The heart and the old aneurisms which would have been of such interest as pathological specimens were thus unavoidably lost to the profession.

Case 3.—*Peculiar Case of Rheumatism.*—The notes of this case were taken by Mr. W. CROTHERS.

A. G., æt. 21; laborer, was admitted on the 4th of May, complaining of slight pain in his side, and of general debility.

Upon examination no abnormal sounds were heard in the lungs. A coarse blowing systolic murmur was made out, most distinct at the left apex, and transmitted around the left side to the lower angle of the scapula and the left intervertebral groove. By palpation a very distinct thrill could be felt over the apex, synchronous with the first sound, heart's action was intensified. The pulse was 80, small and somewhat feeble. No redness, pain, swelling or tenderness on pressure, could be discovered in any of the joints. Tongue was coated with a white fur. The saliva was acid. The urine was acid and contained no albumen. Upon enquiring into his history, it was ascertained that he suffered from a mild attack of inflammatory rheumatism two years previously. Could not tell whether his heart had been affected, as he had not been attended by a medical man. The present illness had begun with a chill two days before admission, followed by slight fever and a feeling of lassitude and prostration. From the peculiar symptoms, Dr. MacCallum considered the case to be one of acute rheumatism in which the very unusual phenomenon had occurred, of the heart being affected before the joints had become swollen and painful. Upon this supposition he was ordered half dram doses of Potas. Bicarb., every four hours, and a blister was applied over the præcordial region.

After a day or two his knees became tender and swollen, and shortly afterwards his wrists. Under treatment, how-however, the pains disappeared, the secretions became alkaline, and the heart murmur softer. So that on the 15th of May he was discharged quite well. No murmur being perceptible.

During Dr. MacCalum's quarter there have been a great many cases of rheumatism, many of them being very severe and complicated with heart affections. The treatment that seemed to secure the most favorable results, was a combination of alkalies and blisters. At the outset pot. bicarb. was prescribed in thirty to forty grain doses every three hours, till the secretion ceased to be acid, when

iron and quinine were generally substituted for the alkalies, Digitalis being added to the iron if any heart complication existed. Locally, blisters from one to two inches in width were applied, encircling the limb a little above the painfnl joints. The relief from the blisters was most marked, the patients very frequently asking for a blister when a fresh joint was becoming painful. Fuller's alkaline wash was tried in two cases, but the results were quite unsatisfactory and blisters had finally to be resorted to. The average duration of treatment was twenty-one days, the longest being five weeks. The early exhibition of alkalies failed in many cases to ward off the complications ; in two instances, although alkalies had been pushed from the outset, a severe attack of pericarditis supervened ; and in several other cases, an endocardial murmur was produced. All the cases made a good recovery.

Excision of Enlarged Glands in Axilla, By GEO. E. FENWICK, M.D. Reported by J. D. CLINE, B.A., M.D., Assistant House Surgeon, Montreal General Hospital.

E. W., æt. 20, was admitted into hospital on the 26th of June, under the care of Dr. Fenwick. She was a well made healthy-looking country girl. Says she was never considered delicate. Family history good. About two years ago the lymphatic glands in the left axilla began to to enlarge without, however, any deterioration to her general health. There is no history nor suspicion of syphilitic taint. Lately these glandular tumors were becoming so large as to interfere with the usefulness of the left arm.—There was no pain in them. On her admission into Hospital, Dr. Fenwick observed that he did not believe that constitutional treatment would have any marked effcct in reduc. ing the size of these glands or occasioning their absorption. That these tumours were usually met with in young women, and that if left alone they sometimes grew to a large size. In this case several of the glands were enlarged and could

with ease be removed by enucleation ; they were perfectly free having no firm attachments, and that he considered it advisable to remove them without delay. The glands in the right axilla were larger than usual in that region, but there was no evidence of general glandular enlargement.

On the 28th of June, the patient was put upon the operating table and chloroform administered. An incision about four inches long was made down the centre of the axillary space. The operator as he came to each enlarged gland seized it, and cutting through the cellular tissue as far as the investment of the gland, readily enucleated it. Fourteen in all were removed, varying in size from that of a large bean to that of a turkey's egg. There was no hæmorrhage. The wound was closed by a continuous suture of carbolized catgut and through the opening at the lower part of the wound a piece of drainage tube was left protruding, being retained in its place by a strip of adhesive plaster. The night after the operation there was a little fever, the temperature rising to about 100°, this disappeared next day, after which there was no further constitutional disturbance. The whole incision healed by primary union except the lower part through which the drainage-tube protruded. This was gradually pushed out by granulation of the deep part of the wound, and in six days the girl was sent home having only a superficial granulating spot at the lower end of the wound. The dressing throughout was a very dilute solution of carbolic acid. The catgut suture was not removed at all. It produced no irritation whatever.

Wound opening the Knee-joint. Successful Result. Under care of Dr. FENWICK. Reported by J. D. CLINE, B.A., M.D., Assistant House-Surgeon, Montreal General Hospital.

Wounds opening into the joints are generally of sufficient gravity to give the practical surgeon much uneasiness as to the ultimate result. When a larger and important joint is opened there is great danger of loss of the limb if not of the life of the patient through the constitutional disturbance

which frequently follows. Accidents of this nature occuring to an adult are almost invariably destructive in their tendency. Occasionally in children and young adults injuries to large joints, in which their cavity has been laid open have been recovered from. This favourable result may however be regarded as exceptional. Accidents of this nature are fortunately not often met with and the importance of the subject is such as to warrant the publication of the following case.

G. C. act. 14 was admitted into hospital on the 24th of June. Three weeks before this while standing near a man who was using an axe, the handle of the axe broke and the axe hitting him on the outside of the right knee made a cut about three inches long under the patella laying open the joint. The edges of the wound were stitched together and dressed with plaister. The wound healed in a week when he went about, the leg being stiff but not painful. After he had been going about for a week, on Saturday night he had a very severe chill and next morning the joint was very painful and much swollen. A poultice was applied and on Monday morning the wound opened again. On the following Thursday, the 24th of June, he came into the city to the hospital. The condition of the joint at this time was as follows :—It was swollen, hot and painful : on the outside of the joint was a wound two inches long, part of it being united, through which drained away a copious discharge of purulent synovia which became coagulated around the edges of the wound. Through the centre of this a probe could be passed into the joint.

The limb was immediately put on a MacIntyre splint, and linseed poultice applied. The discharge was very profuse for some days, but in a week it became much less, and the pain disappeared. Now the poultice was changed for a simple dressing of carbolic lotion. The discharge changed in character and became more like natural synovia and in two days it ceased entirely.

July 15th. The patient has been now three weeks in hospital and the condition of the joint is as follows :—

The external wound is almost healed; there is no pain; patient can move the joint without pain; there is no roughness on movement of the leg; the patella is moveable yet when moved it communicates the sensation of thickening of the synovial membrane; there is visible and palpaple enlargement of the whole joint. The joint is still fixed on the splint.

July 24th. The splint was to-day removed and a glue bandage substituted. The boy could flex the leg almost perfectly. He is now going about with the bandage. He can bear the weight of his body on the right heel and has no pain whatever in the joint.

Primary Hunterian Sore on lower eyelid, under care of GEO. E. FENWICK, M.D. Reported by J. D. CLINE, B.A., M.D., Assistant House Surgeon, M. G. H.

N. M., a Dane, æt. 44, was admitted into Hosipital on the 7th of July. His right eye and cheek were very much inflamed, and on the palpebral margen of the lower lid was a sore about the size of a split bean, with prominent edges, and well marked cartilaginous induration of the edges and base. There was a similar sore at the inner canthus. His eye had been sore he said for three weeks. He attributed it to exposure to sun and wind. The patient had been a farm labourer. There was a large indurated gland at the angle of the face, and a chain of simaller ones down the right side of the neck, below the mastoid process.

On his admission there was applied to the side of his face lead lotion, which removed the erysipelatous readness of the cheek; but the sores were spreading.

July 9th. Touched the sores with strong nitric acid.

July 12th. As the sores did not tend to heal, Dr. Fenwick put him on constitutional treatment, odering:

℞ Hyd. Bichlor. gr. i.; Potass Iod. ʒ i.; Ext. Sarzæ fld. ℥ i.; Aquæ ad. ℥ vi.

Of which a tablespoonful was taken three times a day. On the same day the sores were again cauterized with nitric acid.

From this day the sores began to improve, and by the 24th the large sore was reduced to the size of half a split pea; the induration was disappearing, and also the enlargement of the glands. As the man was anxious to return to work he was discharged but ordered to continue the medicine. It was impossible to ascertain what had been the direct source of contagion. I omitted to remark that he had no sore anywhere else on his body. He had been sleeping with a fellow labourer, a young man, and using the same towels, but he did not know whether this young man was diseased or not, He had never suffered from anything of the kind before the present sore made its appearance.

From the peculiar nature of the sore, its firm hard cartilaginous base, the scanty secretion, absenee of pain and the induration of the lymphatics at the back of the neck; and furthermore its rapid improvement, under constitutional treatment, their can be no doubt that the case, however singular its situation, is one of primary syphilitie origin.

Reviews and Notices of Books.

Compendium of Childrens' Diseases; A Handbook for Practitioners and Students; by Dr. JOHANN, STEINER. Translated from the second German edition by LAWSON TAIT, F.R.C.S.—8vo. pp. 403: New York, D. APPLETON & Co.

The rapidity with which the first edition of this admirable work was exhausted testifies to the estimation in which it was held by the profession generally. In Germany a second edition was called for, and Mr. Lawson Tait has embodied in his translation the additions and corrections which appeared in the revised edition.

The first division of the book, treats of the investigation

of disease in infants and young children, and is systematic and practical.

The second division is concerned with diseases of the nervous system, and this extensive subject is treated of concisely and clearly.

In the subsequent divisions are taken up the diseases of the organs of respiration, circulation, and digestion ; of the urinary and sexual organs ; general diseases of nutrition, zymotic diseases, and diseases of the skin.

The chapter upon diseases of the nervous system and digestion, are very good, and before treating of the diseases of the digestive organs, the author makes some prelimiuary observations upon the nourishment of children.

In Epilepsy, in those cases in which the cause cannot be discovered and removed, a favourable result from the administration of any drug can scarcely be expected.—He has tried atropine in these cases but without anv good effect, and he considers it, even in minute doses, an unsafe remedy for children.—Potassium Bromide has given negative results in his hands, except weakening and diminishing the paroxysms in some cases, after large doses had been given and a degree of saturation of the system attained. It has never effected a permanent cure in his experience..

In exudative croup, tracheotomy is advocated, and, according to the statistics of the operation at the Children's Hospital at Prague, 34-6 per cent. of these cases have been saved by this means. — Mr. Lawson Tait, gives some valuable directions for the after treatment of cases of tracheotomy, drawn from his own large and varied experience.

The chapter upon diseases of the urinary and sexual organs is very complete, and carefully written, as are also the remaining chapters on general diseases of nutrition zymotic diseases, and diseases of the skin.

At the end of the book is an Appendix containing rules for the management of infants, which have been issued by the staff of the Birmingham sick children's Hospital, and

which we could wish that every mother in our land not only knew by heart but faithfully carried out.

We are sure that this book will be found a very useful one by many practitioners; it is written in a concise and clear style, its only defect to our mind being a profusion of *sesquipedalia verba*.—The translator has done his work faithfully and efficiently, and Messrs Appleton have presented it to the profession on this side of the water in a creditable form, although unfortunately there are some typographical errors, and at the foot of page 402 we are suddenly lost, the paragraph as it stands, being unfinished. Have we received by error an incomplete copy of the book?

Periscopic Department.

SURGERY.

An Inquiry into the Condition of Fifty-one cases of Lithotrity in Elderly Adults, Made at Periods of One or Two Years After Operation. By Sir Henry Thompson, Surgeon Extraordinary to H. M. the King of the Belgians; Emeritus Professor of Clinical Surgery in University College; Late Surgeon to the Hospital.

In the Lancet of April 3rd I reported the results of my last 100 stone operations (lithotomy and lithotrity) on adult patients averaging 63½ years of age, amongst whom there were 6 deaths, and consequently 94 recoveries. Mr. Thomas Smith made an enquiry in the following number of the journal relative to the condition of the patients on whom *lithotrity* had been performed, at any period not less than twelve months after the procedure, with the view of ascertaining whether the results of that operation were permanent. Such an investigation I thought desirable, and promised to make it; for although the general results must be well known to myself, I had never applied an exact or numerical test in order to determine them.

I have therefore sought, by writing and personal inter-

views, to obtain information of the present state in all those cases of this series in which the operation of lithotrity was performed more than twelve months ago—that is between December, 1872, when it commenced, and May, 1874. Consequently the time after operation is much longer than that which Mr. Smith suggested, for while the last case was treated fully twelve months ago, more than two years and a quarter have passed since the first of the series was operated on.

I find that between the dates named—a period of about seventeen months—I performed lithotrity on 53 patients, of whom two died, leaving 51 cases of recovery. The mean interval betwen the date of operation and the present report of condition, for these 51 cases which are the subject of inquiry, is, therefore, about twenty months instead of "one year." An examination of these cases, given in a tabular form below, shows that respecting six patients I have been unable to obtain the information required; but the weight of such evidence as exists relative to these is greatly in favour of their being better and not worse than the average, since their mean age is only fifty-four years, nearly ten less than the mean of the whole series. As I am compelled to omit these from my reckoning, I believe that my report is less favourable to lithotrity than it ought to be.

The number of individuals, then, of whom I have precise information is 45, averaging about sixty-four years of age Of these, 11 have since died. The causes, certified by their medical attendants were—2 of organic heart disease; 1 of malignant disease; 1, at eighty, of natural decay; the other 6 of urinary disorders and advanced age together (the mean age being sixty-six years). All but one of these latter were individuals who for several years had passed no urine except by catheter, who owed their lives solely to surgical art, and who without it must have died miserably some years before. The prolongation of life had been entirely due to the improved modern means of mechanically removing retained urine and accumulated phosphatic deposits. Of the 45, 34

are living still; 28 of them enjoying good health and active existence, at a mean of sixty-three and a half years of age. The other 6 have some signs of recurring calculus, 2 having had a newly formed calculus removed; all are well but one of these, who is in bad health and suffers much.

I think I may leave these figures to speak for themselves. I shall make one observation, however, which, although a very natural one, does appear not to receive the consideration which I think it deserves. Supposing that these 53 cases of lithotrity (including 2 deaths with 51 recoveries) had been cut instead of crushed, how many fatal cases would have followed the operation? Their average age being sixty-three, 14 deaths would not have been a bad result, somewhat better than published tables offer us.* But after these operations, mainly done in 1873, only 11 deaths have since occurred *up to the present date.* And even if we were to reckon all these as deaths resulting from the operation, although as may be seen below, they were quite unconnected with it, we still should have a total of recoveries larger than after lithotomy. There is, however, much reason to believe that the few examples of chronic cystitis with recurring phosphatic deposits, subsequent to lithotrity, occur generally in those feeble and diseased persons to whom lithotomy is most commonly fatal. The fact is, that almost all those patients whose subsequent troubles remain, and who to superficial observers, appear to discredit lithotrity, do in reality owe their existence to the operation, and are trophies of life absolutely saved by it.

Thus it is that lithotrity, as I have observed, has created a new set of cases—men who, until the process was brought pretty nearly to its present perfection, never lived. Respecting them I should like to write the results of my experience, and hope ere long to do so. They are men whom lithotrity keeps alive—who, thanks to the ease and safety

* I may refer to my own table of 1827 cases, collected with great care, among others, as supporting this view. "Lithotomy and Lithotrity," 2nd edit., p. 142.

with which a small and newly formed phosphatic calculus can be crushed, go on for years to live and even to be active. These cases have to be kept apart from other cases of stone, because it would invalidate any inference from numerical statements were a surgeon to reckon as a "case of lithotrity' each time, perhaps twice a year or more, he removed a calculus from such a patient, although it might not always necessarily be very small. But it is not to be forgotten that before the time of lithotrity there was no adequate help for such a patient except by the cutting operation, and many such died miserably with bladders filled with phosphatic material.

I am very glad to have made this inquiry, although it has entailed no little pains and labour; since I venture to hope that it may prove to be, not merely a new, but also a useful contribution to our knowledge respecting lithotrity.

1. A gentleman aged thirty-six; operation, Nov. 1872; uric-acid calculus. I have no knowledge of the address. He made an excellent recovery; and I should, at his age have probably heard more of him if his health had not continued good.

2. A gentleman aged seventy-five; operation, Dec. 1872; phosphatic calculus. In May, 1875, Mr. Gardner, of Gloucester-terrace, reports to me this patient in his usual health.

3. A gentleman aged sixty-nine; operation, Jan. 1873; uric-acid calculi. This patient who was under the care of Mr. Newton of Upper Wimpole-street, writes me (June, 1875): "I am in perfectly good health, and have no uneasiness or feelings that lead me to suppose I have any stone in my bladder now."

4. A gentleman aged sixty-five; operation, Jan. 1873; phosphatic calculus. Mr. J. H. Bartlett, of Notting-hill, writes me that this patient had no further symptoms of calculus, and that he died of heart disease three months after.

5. A gentleman aged sixty-eight: operation, Jan. 1873. This gentleman had for many years passed all his water by catheter. His life had been prolonged, with very advanced

prostatic disease, by great care and frequent removals of phosphates as they formed. He died, his urinary organs being quite worn out, with extensive sacculation of kidneys and ureters, in December of the same year.

6. A gentleman aged fifty-one; operation, Feb. 1873; uric-acid calculus. Mr. Allen, of Milner-square, Islington, writes me (May, 1875) that this patient is perfectly well.

7. A gentleman aged thirty-six; operation, Feb. 1873; uric-acid calculus. No return, and is perfectly free from symptoms at present.

8. A gentleman aged sixty-four; operation, Feb. 1873; phosphatic calculus. This patient had always passed all his urine by catheter. He had no return of his stone. He became insane, and used the instrument very carelessly. In January, 1875, I was called to see him with severe extravasation of urine, resulting from injury, of which he shortly after died. I saw him with my friend Dr. Murchison.

9. A gentleman aged sixty; operation, Feb.–March, 1873; phosphatic calculus. I heard from this gentleman a few days ago (May 1875). He is in excellent health, and is leading a very active life.

10. A gentleman aged sixty; operation, March, 1873; uric-acid calculus. Dr. Manson, of Chesterfield, writes me (June, 1875) that this patient "remained quite free from any symptoms of recurrent calculus to the day of his death, which resulted from typhoid fever in December, 1873. He was perfectly satisfied with the result of the operation."

11. W. C——, aged sixty-seven; operation, March, 1873; uric acid; treated at University College Hospital. For many years he has passed small uric-acid calculi; and, having recently had one in his bladder which he was unable to expel, it has been successfully crushed for him in the country.

12. A gentleman aged seventy-one; operation, April, 1873. Writes me (May, 1875) that he continues quite well.

13. A gentleman aged sixty-seven; operation, April, 1873; uric acid. Recently seen by myself, he is perform-

ing his duty as a member of Parliament, and enjoys excellent health and strength.

14. A gentleman aged sixty-one; operation, April, 1873. I have just seen him. He is in perfect condition as regards his bladder. His stone was a large uric-acid formation. His medical attendant, Mr. Leppington, of Great Grimsby, writes me that "he has had no symptoms of any return of vesical mischief."

15. A gentleman aged fifty-nine; operation, April, 1873; oxalate-of-lime calculus. He was quite well six months ago, but I have not got his address, and have failed to find him.

16. A gentleman aged seventy-nine; operation, April, 1873; uric acid. Had no return of his calculus, and died about a year afterwards of some other malady, apparently from natural decay.

17. W. B. H.——Aged sixty-three; operation, May, 1873; uric acid. Treated in UniversityCollege Hospital successfully, and his present address and condition are unknown.

18. A gentleman aged sixty-seven; operation, May-June, 1873; large phosphatic stone. Writes me, (May, 1875,) that he is perfectly well, and better in health than for many years.

19. A gentleman aged sixty; operation, May-June, 1873; large uric-acid calculus. Dr. Evan Jones, of Aberdare, writes to inform me that the patient had rigors in September, and signs of blood-poisoning; no abscesses; and died comatose Oct. 23rd. He had left me in fair condition at the end of June, with some suspicion that the kidneys were not sound.

20. J. W. ——(University College Hospital,) aged fifty-four; operation, June, 1873; phosphatic calculus. Has long passed all his urine by catheter. Having just written to ask how he goes on, he replies that he was quite well for a long time after operation, but he begins to have signs of some phosphatic formation and wishes soon to be examined.

21. J. W.——,aged thirty-six; operation, June, 18

uric-acid calculus. Treated successfully in University College Hospital, and his present address and condition are unknown.

22. A gentleman from the Brazils, aged fifty-six; operation, June and July, 1873, very large phosphatic calculus. One of the most formidable cases I ever had. He made a most excellent recovery, always, as before the operation, passing all his urine by catheter. He came to me last summer (two years after operation), and I removed a small phosphatic formation which had been developed, and he left me as well as ever.

23. A gentleman aged forty-one; operation, July, 1873. I have just seen this patient; he has enjoyed fair health, and has had no return of his malady. The stone was originally oxalate of lime, and he is subject to irritation in the urinary passages and occasionally to orchitis. He leads an active life.

24. A gentleman aged seventy-seven; operation, July, 1873; uric-acid calculus. In excellent health for his age. No return of his malady. Uses a catheter twice a day, and is under the care of Dr. Jackson of Southsea.

25 A gentleman aged sixty-two; operation, Oct. 1873; phosphatic calculus. Had long passed all his urine by catheter and at short intervals. I removed a phosphatic calculus of considerable size, the result of constant cystitis; but he died exhausted from incessant catheterism about a year after.

26. A gentleman aged sixty-five; operation, Aug. 1873; uric-acid calculus. Seen again in the latter part of the year. Recovery perfect, but have not the address, and cannot learn any later particulars.

27. An American gentleman, aged sixty seven; operation, Aug. 1873; phosphatic calculus. He wrote to me in the following year that there was no return whatever of his complaint.

28. A gentleman aged sixty; operation, Aug. 1873; large uric-acid calculus. I cannot learn anything of this

29. A gentleman aged seventy-seven; operation, Aug. 1873; uric-acid calculus. I have just seen this patient, (June, 1875). He has had no return whatever of calculus symptoms, and is passing his catheter three times in the twenty-four hours on account of inability to empty his bladder from enlarged prostate. He is enjoying excellent health.

30. A gentleman aged sixty-seven; operation, Aug. 1873; uric-acid calculus. This patient has not been much relieved. He passes his urine chiefly, if not altogether, by catheter, and, in spite of all treatment, phosphatic matter forms and must be removed.

31. A gentleman aged fifty-six; operation, Nov. 1873; a phosphatic calculus. He had no return of it. Mr. Pearson, of Manchester, writes me that he died of malignant disease in January last.

32. A gentleman aged seventy-eight; operation, Nov. 1873; uric-acid calculus. His medical attendant, Mr. Hicks, of Easingwold, writes me (June, 1875); "The patient has been perfectly free from vesical troubles ever since."

33. A gentleman aged seventy-six; operation, Nov. 1873; uric-acid calculus. Have just seen him, (May 1875); he has had no return whatever of his complaint.

34. A gentleman aged seventy-two; operation, Nov. 1873; oxalate of lime. I saw this patient a month ago (May, 1875). He is in perfect health, and has had no return whatever of his complaint.

35. A gentleman aged sixty-three; operation, Nov. 1873; uric-acid calculus. His medical attendant, Mr. Robert Parker, of Malpas, Cheshire, has just written me (June, 1875), that this patient is "feeling as well as ever he did in his life."

36. A gentleman aged seventy; operation, Dec, 1873; He made a most excellent recovery; left me a hale and hearty man, and I have no doubt is quite well, but I have no clue to his address I believe he is living in Dundee or its neighbourhood.

37. A gamekeeper at Balmoral, aged sixty-one; operation, Dec. 1873; a phosphatic calculus. He has just written me (May) that he "is keeping well and able for his duty."

38. A gentleman aged sixty-four; operation, Jan. 1874; a large phosphatic stone. Seen with Dr. Holman, of Reigate. Had not emptied his bladder some time before operation. Still uses his catheter. In good health, and has no return of his malady.

39. A gentleman aged sixty: operation, Feb. 1874. This was a uric-acid stone of unusual size, and the difficulties were remarkable. I saw the case constantly with Mr. Blaker of Brighton. He had long-continued troubles afterwards from inability to pass urine by his own efforts and frequent catheterism. He has slowly improved, and is now in a comfortable condition, with no return of stone formation.

40. A gentleman aged sixty-one; operation, Feb. 1874; a uric-acid stone. I have lost sight of him, and cannot learn his address.

41. A gentleman aged seventy; operation, Feb. 1874. A uric-acid stone, complicated with advanced disease of the bladder. The former was easily removed, but no improvement took place, and he died of the latter about six months after.

42. A gentleman aged sixty-two; operation, Feb. 1874; a uric-acid stone. Called on me May, 1875. In excellent health; no reappearance of stone symptoms. Occasionally under the care of Dr. Macdonald, physician to the Duke of Argyll.

43. A gentleman aged sixty-seven; operation, Feb. 1874. Died suddenly of mitral disease about ten days after the stone, mixed oxalates and urates, was successfully removed.

44. A gentleman aged seventy-eight; operation, March, 1874: phosphatic calculus. Has many years passed all his urine by catheter, and had had a stone removed in 1870;

the second in 1874, after which he lived about five months,

45. A gentleman aged sixty-six; operation, march, 1874; very large uric-acid calculus. This gentleman has just written me (June 1875): "I am well pleased to inform you that I have been very well indeed until the latter end of March." He adds that he has lately had a little irritability of the bladder, which has passed off.

46. A gentleman aged seventy-two; operation, March, 1874; uric-acid calculus. Seen with Mr. Sibley, of New Burlington-street. Is now (June, 1875) in perfect health; no sign of his malady remaining.

47. A gentleman aged fifty; operation, March, 1874; a uric-acid stone. Has been in excellent health since. In January last he passed a small uric-acid calculus per urethram. He is now living at Antwerp, and is quite well.

48. A gentleman aged sixty-five; operation, April, 1874; a phosphatic calculus. This patient had for many years passed all his water by catheter, frequently doing so as often as twelve to fifteen times in the twenty-four hours. He has been quite well until lately, and has just called (June, 1875) to inform me that symptoms have reappeared. I find a re-formation of phosphatic matter, which I shall have to break up and wash out. Otherwise his health is excellent.

49. A gentleman aged sixty; operation, April-May, 1874; uric-acid calculus. He called on me in February last, in excellent health, and without any symptoms of his old complaint, and walking several miles daily.

50. A gentleman aged sixty-eight; operation, May, 1874; large uric-acid stone. Dr. Lambert. of Sunderland, writes [June, 1875] his "condition at the present time is perfectly satisfactory."

51. A gentleman aged sixty-one; operation, May, 1874; uric-acid calculus. Dr. Helsham, of Brixton-road, writes, in May, 1875, that this patient is travelling on the Continent in perfect health.—*The Lancet.*

Annandale on Knock-knee.

In the *Edinburgh Medical Journal,* July, Mr. Annandale describes a new operation for the cure of knock-knee as follows. On the 3rd of March last, a little girl aged six, was brought to me from Glasgow, on account of a serious deformity of her right leg. Mechanical means had been employed for two years with the object of relieving the condition, but without success, and the deformity was steadily increasing in severity.

A careful examination determined an aggravated form of knock-knee, and it was found impossible, in any position of the limb, to bring the leg into a straight line with the thigh, the head of the tibia forming a considerable angle with the condyles of the femur. The femur had a distinct bend inwards and forwards about the junction of its lower and middle thirds, and the condyles of this bone were much more oblique in their direction than in the natural condition.

The adductor muscles were somewhat contracted, and the distortion was such that the patient walked with difficulty. The left limb was well developed and natural in position. A study of the case convinced me that the oblique position of the condyles, the result apparently of the bending of the shaft of the femur, was the principal obstacle which was preventing the tibia and leg being brought into a line with the thigh, and it therefore seemed to me, that if this obliquity could be removed, the deformity might be cured or very much relieved.

Two ways of removing this obliquity suggested themselves. The first was to divide the shaft of the femur at the point where bent; the second to remove an oblique slice of the condyles. The latter operation would be attended with more risk than the former, because it necessitated the incision of the knee-joint. But some little observation decided me to adopt the latter proceeding, for I felt sure that it would be more effectual than the former, and I trusted that the risks of opening into the joint would be counteracted by the careful use of the antiseptic treatment.

The consent of the child's parents having been obtained, I operated on March 16 in the following way.

An incision, about five inches in length, was made along the inner aspect of the knee-joint, the articulation opened into, the internal lateral ligament cut across, and the patella and its ligament being drawn outwards, the crucial and external lateral ligaments were also divided. An oblique slice was then sawn off from the condyles of the femur, the tibia not being interfered with. After the removal of this slice of bone the leg was readily brought into a straight line with the thigh ; and a drainage tube being inserted into the cavity of the joint, a few sutures were applied, and the limb placed on a wire splint, in the straight position. The whole operation was performed under the antiseptic spray, and the usual antiseptic dressing was applied to the wound.

Some suppuration of the wound followed the operation, but this gradually ceased, and on March 24 the discharge was so slight that the dressing was changed only once in two days. On April 25 the wound was quite superficial, and on the 29th of this month, the wound was soundly healed. On May 6 the patient was allowed to get out of bed, the joint being supported by lateral splints, which were removed daily to permit of passive movements of the joint being made. On May 30 the splints were entirely removed and the patient allowed to bear weight on the limb. At this date the limb was perfectly straight, and of equal length with the opposite one. The lateral mobility of the joint was very slight, and very much as in the natural condition. Flexion and extension were very limited.

On June 5 I placed the patient under chloroform, and forcibly bent the knee to rather more than a right angle, and I also moved the joint freely, so as to break down the adhesions which had resulted from the operation. No bad consequence followed this forcible bending of the knee ; and two days after the patient was again going about the ward with the help of crutches, and able to bear weight upon the limb, the mobility of the joint being decidedly i

Remarks.—I am not aware that this or any similar operation has been before practised in case of knock-knee, but the successful result obtained in the case reported encourages me to recommend this method of operating in certain aggravated cases of the deformity which have resisted the division of the biceps, tendons, or other tense structures, and carefully applied mechanical treatment.

The employment of the antiseptic treatment in this and similar operations I consider most valuable, and I must confess that it was my confidence in this treatment which led me to freely incise so important a joint, and to carry out the proceeding described.—*The London Medical Record.*

MIDWIFERY.

Case of Sterility from Anteflexion of the uterus, and constriction of the Internal Os Uteri, Cured—By HEYWOOD SMITH, M. A., M. D., Physician to the Hospital for Women and British Lying-in Hospital.

Of all the causes of sterility depending on malposition of the uterus, that of anteflexion is the most frequent. Other malpositions of the uterus, except marked retroversion, leaves the cervix uteri depending into the posterior original *cul-de-sac* in the dorsal decubitus ; but in acute (I here use the word acute with regard to the angle, not time) anteflexion, the os uteri is lifted out of the posterior *cul-de-sac*, and placed in a position unfavourable for the imbibition of the semen. Anteflexion, dysmenorrhœa, and sterility, are three conditions so frequently associated, that, when a patient comes complaining of dysmenorrhœa, and is also barren, a vaginal examination more often reveals anteflexion than any other condition. And here it may be noticed that it is the dysmenorrnœa that causes the patient to seek for advice. Among the applications for relief at hospitals, pain is that for which medical advice is generally sought, barrenness. The latter is either considered a . or women give themselves up to their fate, never

for a moment supposing that such a condition is remediable; whereas among the upper classes, when property or name are at stake, medical men are more frequently consulted for relief from barrenness; and in such cases, pain not necessarily being an element of complaint, the sterility may be found to depend on many causes other than flexion. It is therefore, perhaps, more among the poorer classes that favourable results, as far as sterility is concerned, may be looked for from operation and treatment for the cure of anteflexion, and for the relief of obstructive dysmenorrhœa.

E. S., aged 29, married six years, became an out-patient at the Hospital for Women, February 20th, 1871. The catamenia commenced at the age of 18; they were regular, with some pain generally before the flow. The passage of the thick sound before the period lessened the pain. She was admitted into the hospital on July 3rd, 1871. The uterus was normal in size; a thick sound could be passed after some gradual pressure, and the constriction held the sound rather firmly. On July 18th, Dr. Protheroe Smith's uterine dilator was used to half an inch. On the 17th, the dilator was used to three-fourths of an inch, and the constriction at the internal os divided bilaterally with a straight knife, as well as the external os slightly, and a spring metallic (Greenhalgh's) stem introduced. On the 19th, the stem was extended half its length, with some forcing pains, and was replaced. On the 23rd, the patient was free from pain. A slight blood-stained discharge continued. On the 26th the stem was removed; and on July 31st, the patient was discharged.

In April of the following year (1872), she was seen again. The external os was divided a little more freely, and the spring stem again introduced. It remained in altogether nearly three weeks. The patient continued under observation from that time, the thick sound being occasionally passed until conception took place, after the catamenia of November 13th, 1873; and she was delivered of a living female child on August 31st, 1874.

The above case is given in order to encourage practitioners not to lose sight of a case after operation for dilatation of stricture of the internal os, because pregnancy does not immediately follow, but to persevere, by the occasional passage of the thick sound, to maintain the cervical canal in a state of sufficient patency.

Moreover, it often happens that, for some time after forcible dilatation, there may exist some chronic irritation of the cervical mucous membrane with or without granular inflammation of the labia uteri, which, giving rise to leucorrhœa, of some form or other, may hinder impregnation. And here it may be well to insist on the necessity of not trusting to dilatation alone, whether by tents or by the introduction of graduated sounds, to enlarge the cervical canal. For if dilatation alone be had recourse to, its action is only temporary, for the uterine fibres are thereby merely stretched, as India-rubber might be, and, on the stretching force being intermitted, the cervix returns to its usual condition.

The dilatation must be associated with, and made subsequent to, incision of the canal. After incision of the cervical canal from within, which need not be extensive, dilatation then continues the incision with a slight rupture, and, this being kept from closing, the dilatation remains permanent. Many failures of this treatment are due to the external os being too freely divided, and being thereby rendered too patent; the act of imbibition is greatly interfered with, if not altogether prevented. The object to be gained is slightly to enlarge the cervical canal, and, at the same time, not to destroy the orifice of the uterus.—*British Medical Journal.*

The profession throughout the country will be glad to hear that Dr. Bovell, for many years one of the leading consulting physicians in Toronto has returned from the West Indies, where he has been for the last four years.

CANADA

Medical and Surgical Journal.

MONTREAL, AUGUST, 1875.

DRUGGISTS PRESCRIBING AND THE SALE OF POISONS.

In the act of amendment, to the act of incorporation of the Pharmaceutical Association of the Province of Quebec, there exists a most stringent clause against the sale of poisons except on the prescription of a physician.

The provisions of that clause are comprehensive, it is sufficiently indicated that "poison is not to be sold" to a person unknown to the seller; unless introduced by a person known to the seller; and on every such sale of every such article, the seller shall before delivery, make or cause to be made an entry in a book to be kept for that purpose, stating in the form set forth in schedule B., of this act, the date of the sale, the name and address of the purchaser, the name and quantity of the article sold, and the purpose for which it is stated by the purchaser to be required, and to which the signature of the purchaser, and of the person if any who introduced him shall be affixed." Then follows a list of poisons which are prohibited to be sold.

We notice that Chloral Hydrate is not down in the list referred to and we think the omission should engage the attention of the Legislature at its next session with a view of amending this clause; making it more definite and including some dangerous drugs which are not to be found in the list of poisons. This is a subject which should engage the attention of the Pharmaceutical Association itself

as it is in the interest of public safety that members of that association should not take upon themselves to prescribe and dispense drugs of this character without a physician's prescription.

Recently a medical man was called to see a patient of his who was profoundly under the influence of a large dose of chloral, upon inquiry he ascertained that a druggist in this city, had taken upon himself to prescribe and dispense a large bottle of solution of chloral hydrate, the patient took a dose and feeling himself dizzy, took a second and this was followed shortly after by a third, fortunately the man had a profound sleep of several hours duration, and then recovered. We say fortunately, because no disaster followed, had the man died, a coroner's jury could hardly have brought in a verdict other, than one of manslaughter against the druggist for his reckless neglect of the spirit of the Pharmaceutical act. This is no isolated case of breach of the spirit of that act. Quite recently we were called upon to assist a confrere in removing from the stomach of a man by aid of the stomach pump the contents of an ounce bottle of Chlorodyne. It is difficult to determine the precise quantity of morphia contained in an ounce of Chlorodyne, but from its effects, and by general consent, it is believed to be at least of the same potency as laudanum, and therefore it is as dangerous a drug to use indiscriminately as is the tincture of opium. We are cognizant of several cases of opium eaters who have abandoned the use of the article itself and taken kindly to Chlorodyne. It seem to supply for a time at least that distressing craving for the accustomed stimulus which is experienced by those addicted to this wretched indulgence. Here is a strong argument against the sale of patent drugs which are known to contain poison, except in quantities which can not possibly take life. We believe that in the case above referred to, had the patient been left to himself, life would shortly have ceased, the first washings of the stomach not only filled the air of the room with the odour of Chlorodyne, but the water itself

was quite discoloured, and after allowing it to stand, the heavier particles of the Chlorodyne settled to the bottom of the basin in which it was collected.

While on this subject we cannot refrain from mentioning another case of somewhat different character. A young robust man, a laborer, called on a druggist, who is regarded by the common people to be a doctor and is so styled, and complained of having a severe cold with cough. The druggist without knowing what lesion in verity existed, prescribed and dispensed a cough mixture which was to put him all to rights in a few days. The man faithfully took the remedy, became worse and ultimately was brought to the Montreal General Hospital where he died six hours after his admission. A Coroner's inquest was held, and after some difficulty the House Surgeon obtained the consent of the jury to open the body, and ascertain the cause of death. On examination he found that the man had suffered from pneumonia,and that his lungs were in the first stage of consolidation. The investigation ended in a verdict of death by the visitation of God, and not as it should have been, of gross neglect on the part of the poor fellow to obtain efficient aid in his extremity, and of censure or a verdict of manslaughter against the druggist for daring to trifle with human life in prescribing for and misleading a fellow mortal to his own destruction. Many other similar cases we could mention, where temerity on the part of druggists has been followed by death to the victim. This is not pleasant to record, nor is it pleasant to contemplate. The practice of medicine is a most serious and responsible undertaking for a man whose duty it becomes, he is dealing with human life, and if through neglect or ignorance a life is sacrificed he will be held accountable by his Maker. Coroner's inquests in this district have become a by-word of mockery of judicial inquiry. A case occurred quite recently, of a man who died suddenly ; it was known that he was suffering from thoracic aneurism, because shortly before death he had been an inmate in the Montreal General Hospital, and his condition

had been made out by the attending Physician. An inquest was held and the verdict of the jury, suggested we suppose by the Coroner, was death from Apoplexy.

THE CANADIAN MEDICAL ASSOCIATION.

Before this number of the journal reaches our subscribers the Canadian Medical Association will have met at Halifax Nova Scotia to hold its eighth annual meeting. Hitherto little has been done by this association with a view of placing the Canadian profession in a proper light as a scientific body before the world. We expect much good will ultimately result from these meetings although from lack of a proper system of organization very little has so far been done By a proper system of organization we do not desire to throw any slur on the association, but think that if the British system were adopted, of establishing branch Associations throughout the country that real and valuable work would be done at these annual gatherings. There are many subjects which will we doubt not receive due consideration.

Vital statistics will we believe form a part of the programme but without a uniform system of governmental registration it will be difficult to arrive at anything like truthful results. Registration to be effective must be enforced and carried out by officials appointed bythe Crown. Such has been the experience of every country in the world, and we in Canada need not expect to receive reliable information on this subject so long as the present system is permitted to continue. The Roman Catholic Church is averse to a secular system of registration, because it holds that if permitted to be carried out by civil enactment the church would lose that hold over the consciences of the faithful which acts as a barrier to civil marriages, and neglect of baptism. Such are the arguments which we have heard advanced. We can only say that if the votaries of the church are alone held to their duty by

compulsion the sooner they are out of it the better. No true son of the church will neglect the teachings of that church in matters of faith. Nevertheless as a society of men we cannot ignore the fact that marriage is a civil institution, however desirable it may be that it should be sanctioned and consecrated by a religious ceremony.

Infant Baptism is quite another thing. The church teaches that infant baptism is essential, there are however those outside the church, whose teachings they ignore, who do not believe in the necessity of infant baptism This class throughout Canada is by no means small, and without the existence of a law compelling registration many of the children of this class do not appear at all on the register. The fact of having a registration law does not in any way interfere with the doctrines or obligations imposed by the church on the people. These are pure matters of faith and not of custom, and we cannot see that secular registration would in any way interfere with them. The Canadian Medical Association is composed of representative men of a liberal profession, most deeply interested in this subject, and we think that an earnest appeal from that body would have due weight in the councils of the Commons at Ottawa. Registration should be uniform throughout the Dominion. Furthermore from the variety of religious sects which are to be found amongst our people, no particular sect should be permitted to have anything whatever to do in carrying out a registration act. To be efficient it must be under government control.

MONTREAL PUBLIC HEALTH ASSOCIATION.

In the last number of our Journal we took occasion to notice, what we considered at the time, some ill-digested remarks of the Chairman of the Montreal Sanitary Association regarding the dirty back lanes. At a subsequent meeting the chairman is reported to have commented rather earnestly on the editorial in the Journal, saying that

considered that these remarks were very much out of place in a medical journal. At this stage a venerable-looking old gentleman, whom we presume is anxious to bring home the responsibility of these things to particular men, asked the very pertinent question : " Who is the editor of the Medical Journal ?" Having had his curiosity satisfied he resumed his seat. The chairman then continued and wished to know what right the residents in Beaver Hall Terrace had to store their manure in the lane in rear of that terrace. To this we can only reply that these back lanes form a part of the property on which the house stands. As far as the stable manure is concerned, perhaps the President of the Montreal Sanitary Asssociation thinks that by a strong protest on the part of that Association the order of nature will be arrested, and that animals will accommodate the association by depositing no more manure. The trial is certainly worth the trouble, and may be attended with success. "Wonders will never cease." But we suppose as long as the present order of creation exists, and that animal deposits are made, they will have to be stored, for a time at least, in some convenient corner. An outsider to read the comments of the Chairman of the Montreal Sanitary Association would be led to suppose that these manure heaps were regarded by the residents as a species of luxurious smelling-bottle, and that they retain these manure heaps in spite of the pleadings of the press, the thunderings of the Sanitary Association and its chairman, and the occasional summons of Mr. Recorder, with the petty annoyance of loss of time and having to pay $1.50, the costs of an action, which is grievous, and which in any other court could not for a moment stand.

We are happy to announce that Dr. James A. Grant of Ottawa, who has been absent in Europe during the past two months, arrived by the Allans' steamship Pollynesian, on Sunday, 1st instant, very much improved in health.

THE SMALL POX HOSPITAL.

We do not wish to be considered unnecessary alarmists, but we would remind our readers that during the past four or five years small-pox has been very prevalent, lulling in the summer, to break out with greater virulence towards winter. We have heard that the city contemplate closing the small-pox hospital at the Hall house. This is all very well if another suitable place be provided. The small-pox wards of the Montreal General Hospital must be removed or else the hospital will be ruined as a general hospital. It has been stated that the governing body of the Montreal General Hospital feel that in closing the small-pox wards they render themselves liable to action for damages. The reading of the 24 Vic. Cap. 24, clause 1 is that "no warrant shall hereafter issue for the payment of any sum of money granted by the Legislature to any hospital, unless nor until a certificate, signed by a medical officer of such hospital to the effect that there is in such hospital a distinct and separate ward set apart for the exclusive accommodation of patients afflicted with small-pox has been filed with the clerk of the Executive Council." Now this we take it does not oblige any hospital to keep up a distinct and separate ward for the accommodation of small-pox. An hospital may be intended exclusively for some special disease or condition. Take for instance Lying-in hospitals, of which in this city there are some three or four, this clause in the Act applies equally to them, and yet no man in his senses would counsel connecting a small-pox ward with any of these institutions. We have carefully looked into this subject and find nothing in the charter of the Montreal General Hospital which can be construed into an obligation to keep open a small-pox ward. But take the other side of the question. How would an action lie supposing the friends of a deceased person went to claim damage in consequence of their relatives having contracted small-pox which led to their death, they having in good faith entered the hospital to be treated for a slight surgical injury or trivial attack of

disease? These are matters for the governing body of the Montreal General Hospital to carefully consider, and if instances are required wherein valuable lives have been sacrificed, and important surgical operations destroyed, in consequence of the small-pox disease spreading into the general wards, we fancy a goodly number might be produced.

LICENTIATES OF THE COLLEGE OF PHYSICIANS AND SURGEONS OF LOWER CANADA.

We notice by our English exchanges that a person named William Robert Smith of 309 Holloway road London claims to be registered in Canada as a Licentiate of the College of Physicians and Surgeons of Canada. For the information of our contemporaries we may observe that no such college exists in Canada. In Lower Canada or the present province of Quebec the profession are incorporated under the name and style of the College of Physicians and Surgeons of Lower Canada. This act of incorporation was passed in the tenth year of the reign of Her Majesty Queen Victoria. We have the honour to be the Registrar of the College and have looked over the names in the register and have failed to meet with the name of Mr. William Robert Smith. Six years ago, or in 1869, the profession in Western Canada were incorporated by the Local Legislature of Ontario under the name and style of the College of Physicians and Surgeons of Ontario. These are the only legally recognised bodies in this part of the Dominion forming Canada proper, that possess the right to grant a license *ad practicandum*. We cannot say whether Mr. Smith's name appears on the published list of the Ontario College as we are without a copy of that document.

CINCHO-QUININE.

The following card was received from Messrs. Billings, Clapp & Co. some time in March last, and was mislaid, we now give it insertion because having published, two years since, in the columns of this journal an article headed "What is Cincho-Quinine?" this card is as it were a reply to that question. We cannot speak practically of the effects of cincho quinine, never having employed it; but should suppose from its alleged composition that it would be useful and beneficial in cases where the alkaloid itself will not agree:

A CARD.

We desire to call the attention of the faculty to the following analyses of Cincho-Quinine, from some of the most eminent chemists.

BILLINGS, CLAPP & CO., Boston.

Chemical Laboratory of the University of Pennsylvania,

WEST PHILADELPHIA, January 29, 1875.

MESSRS. BILLINGS, CLAPP & Co.

GENTLEMEN,—I have received by express a package marked, "Sealed by S. P. Sharples, January. 22, 1875," and containing a bottle of Cincho-Quinine, with the label of James R. Nichole & Co.. Chemists, Boston, which have tested, and found it to contain *Quinine, Quinidine, Cinchonine,* and *Cinchonidine.*

Yours respectfully, F. A. GENTH,

Professor of Chemistry and Mineralogy.

Laboratory of the University of Chicago.

CHICAGO, February 1, 1875.

I hereby certify that I have made a chemical examination of the contents a bottle of Cincho-Quinine, and by direction I made a qualitative examination for *Quinine, Quinidine,* and *Cinchonine,* and hereby certify that I found hese alkaloids in Cincho-Quinine.

C. GILBERT WHEELER,

Professor of Chemistry.

CANADA

MEDICAL & SURGICAL JOURNAL.

ORIGINAL COMMUNICATIONS.

PRESIDENT'S ADDRESS.

Delivered at the Eighth Annual Meeting of the Canadian Medical Association, held in Halifax, Nova Scotia, the 4th, 5th and 6th August. 1875. By L. B. BOTSFORD, M.D., L. R. C. S., EDIN. ST. JOHN, N.B.

GENTLEMEN,—In the order of business it is now my duty to address you on this our eighth anniversary. With one exception the Association has held its meetings in the Provinces of Quebec and Ontario. On this occasion we have the pleasure of assembling in one of the oldest cities of the Maritime Provinces; which with its noble harbour adorns the Atlantic coast of the Dominion. Perhaps the day is not distant when a session of this same Association will be held on that other shore where the waters of the Pacific wash its Western boundary.

Those among us whose heads are nearing their resting place may not see this event, much less the gatherings of our profession in those intermediate regions which must one day become the home of millions; but you who have commenced the battle of life, when the passing years will have left their impress, and you take your stand between the present and the future, will witness vast changes, and in the meetings of the "Canadian Medical Association" will find yourselves surrounded with brethren, coming from the different quarters of the Dominion—from the Pacific coast with its genial winters,—from the valleys of the Sas-

catchewan and Assiniboine—from the prairies of Manitoba, from the old homestead Provinces of Ontario and Quebec, from those Provinces by the sea, and *you* will reap the benefits which such meetings are so well calculated to confer, for they will embrace the experience of the profession under varying climates and under many conditions. And gentlemen we must not be discouraged by seeming failures. These are incidental to the commencement of all such institutions. The time will come when full success will crown our efforts, and our Association will be commensurate with our nation. We must have our evening as well as morning to constitute a perfect day. We cannot measure the result by present benefits. They will assume proportions which will surpass the anticipations of the most ardent. For no matter how extensive the experience of the individual practitioner, how close his observation, how powerful his mental capacity, he will, if confined to a locality, become cramped by its limits, and it may be his professional growth checked by an incrustation of routine so apt to settle upon us all. Throw the same person into contact with genial minds and he will enter upon new fields of thought, and receive as well as impart new suggestions, and that in proportion to the extent of country which may be represented. This has been the case in other departments of culture, and will prove true when professional brethren meet, for each member from his contact with disease under varying circumstances will bring to light some new experience and at the same time will carry away that detailed by others, each having some special opportunities in the wider field of observation, whilst the most cultivated will be benefitted even in their own special direction by the critical shrewdness of those who may be their inferiors in their specialty, yet their equals if not their superiors in other departments of the profession.

Another result will be the modifying influence which will be exercised on the extreme of the profession. The too hasty will be held in check by the naturally conservative,

whilst the latter will be stimulated to new life by the impulsive energies of the former. And all will be stirred up from a sluggish routine which dislikes to have its calm disturbed, or drifts lazily away with the tide of opinion and accepts the dicta of teachers, rather than enter upon that strict investigation and careful line of thought so necessary to all progress.

By such collisions of mind may we not hope that there will arise some check to fashion, which has lessened and still lessens the influence of the profession. No one can deny the prevalence of fashion. Not merely in the past, when dogmatism prevailed in proportion to existing ignorance, but even now in our own times. The evil is ever ready to come to the surface. Those now living will recollect how Broussais swayed the schools and how his facts and theories were accepted or rejected. How every departure from a healthy condition was regarded as the result of a sthenic state, and how, as a matter of course, bleeding and antiphlogistics were the great agencies for dislodging the enemy. Then again, diseases were ascribed to the failure of vital powers and bloodletting was so little used that it was lately treated by one of the most eminent in the profession as a "lost art." "Building up" was a necessary consequence; and then stimulants advocated as the best means to arrest the flagging powers of life to such an extent that (with many practitioners) no condition would seem to contra-indicate their use. And again the pendulum swings, and already are there some who will not allow that stimulants of an alcoholic character are admissible in any case.

At one time mercury was the great specific, and was pushed to such an extent that men felt the remedy to be worse than the disease: and from the ignorance which led to its abuse there came a rebound, and by some (wisely or otherwise) it is repudiated and cast on one side as a vicious poison. A great change has come over the profession as regards cholera. It is not many years since its contagious or communicable character was generally denied. Now it

is as generally admitted. Thus it is. Theories rise and fall; and medicines, which belonged to observed facts we might suppose to be better grounded, pass through the same phase; to-day used, and commended as efficacious, to-morrow neglected or condemned.

No doubt a few active or powerful minds lead to such results. By their force they set the new system in motion, and the mass follow; and the followers of a sect are always more inclined than the founders to push systematic opinions to the most absurd extreme; "and if we are to believe the recorded results of therapeutic research, conducted under complicated conditions, we shall be obliged to admit that the same diseases have equally well been cured by the interposition of the gods—by witchery and priestcraft—by the most sanguinary and antiphlogistic and by the most mild and expectant treatment; by remedies founded on the rational pathology of the disease; by the administration of infinitesimal parts of nothing; by peppermint water and bread pills. Each and all of those diverse plans of treatment have had their advocates, who bring forward in their favor accumulated masses of evidence."

There can be no effect without a cause. But the difficulty is to determine, amid the complicated actions of the human body, what is the cause. And yet there must be some one or other which shall be efficient in the varying systems of treatment. For if similiar results are attained, are we not compelled to admit that nature asserts *her* supremacy, and, in spite of the errors perpetrated, rises superior to the depressing agencies arrayed against her? Men become the subject of disease, and under every system throw off the morbid state and resume a healthy condition. Many a nostrum has been used and proved apparently successful in the hands of the regular practitioner, and frequently the thorough empiric can parade the cures which have attended his panacea. And both the regular and the empiric have succeeded, not because their remedies were beneficial in themselves (in many cases they may have been

injurious) but independently of the means used. We have therefore, to look for a reason why this should be. Why judicious means shall fail in the hands of one man, and why inert, or it may be injudicious medication, shall be attended with favourable results in the hands of another. It is a common experience to witness the eventual failure of the theories, or of the medicines which have been initiated by strong and ardent minds because they are unphilosophically based, yet the success which has attended theories demonstrates the necessity of looking for some principle beyond mere physical agencies, some underlying cause for the success which follows the same or varying treatment. It may be urged that the "vis medicatrix" explains the difficulty; but that power has been present in the same case in which the philosophical attendant has failed, and the inert globule has afterward succeeded. We are there compelled in *certain cases* to look further for the efficient cause; one which aides the ignorant empiric as much as it does the regular practitioner—one which stimulates the force of the system to renewed activity and to a healthy termination, one which is more than a natural tendency to a sound state —one which exercises a curative power when called into play, and residing in the mind and proceeding from it aids the physician, who enlists in his favor a strong anticipation more potent in certain temperaments then well adapted drugs. This is no new idea. It is one we all recognize, yet one we continually overlook. We are so engaged in the contest with disease—so bent upon effecting results by the power of medicine—that we are practical sceptics of the enormous force which the mind exercises not only over the functions of the organs, but over the structure of the organs and tissues themselves.

Brown Sequard, who has devoted much attention to the nervous system, has thus expressed himself, "Power of the mind over the body is much greater than most of you imagine; indeed, I do not think that any one among you, (he was addressing a public audience) however exalted

may be his idea of the strength and variety of that power, has an adequate conception of its magnitude within the bounds which I will mention." Again he remarks, "The cure of any illness which does not consist in a disorganization of the tissues can be accomplished when the person thinks it can be done. If we physicians, who treat patients every day, had the power to make them believe that they are to be cured, we certainly would obtain less fees than we do. There is no doubt at all that if we could give to patients the idea that they are to be cured, they would often be cured, especially if we could name the time for it, which is a great element in our success." I have succeeded in this way, and I may say that I succeed more now than formerly, because I have the faith that I can in giving faith obtain a cure."

Such are the opinions and experience of a close philosophical observer, one who has devoted great ability and ceaseless energy to the solution of nervous phenomena.

This is an aspect of our profession which demands our consideration; for though it has been well determined that the mind is often seriously affected by the condition of the body, it is questionable whether the body is not as much influenced by the mind, and that changes may thus be brought about even in the tissues themselves. If this is so, it will give one solution why recoveries occur under the same or varying systems of treatment, when the *vis medicatrix* cannot be regarded as the cause. This is a class of cases which gives efficacy to, and confirms each peculiar system of treatment in the estimation of its followers; and it will be futile to reason with any one as to the merits of his system, if he is *conscious* that he has been relieved when using it. We can only do so by going behind the system and showing that there is a cause which is operative though not generally acknowledged; a *cause* capable of producing results of a wondrous character, and when recognised sufficient to reconcile to sound philosophy what now appears a mass of contradictions.

I do not say that this class of persons on whom the mind is capable of producing such results is very numerous; but it is numerous enough to make the results a disturbing element in our medical progress, indeed to such an extent as seriously to affect the laity in their belief, and the profession itself in its certainty.

There are sufficient reasons to make us suspect that under anomalous conditions not only can the functions of organs be affected, as was demonstrated by Mr. Braid, of Manchester, but that changes in the tissues may be the result of disturbance in the nervous force; that this latter can assume various phases, being transmuted into heat or electricity, or manifesting itself in chemical power or motion. Be this as it may, Brown Sequard gives one among many instances in which nerve force caused physical changes of a remarkable character. He says: "A mother was looking at her child who was standing at a window with its fingers on the border of the window under the lifted sash. She saw the sash come down with great force and crush the fingers of the poor child. The mother remained unable to move, feeling immediately a pain in the three fingers at the very place where the child had been injured. The fingers swelled, an effusion of blood took place, ulceration followed, and she was a long time being cured." How this physical change was brought about, by what modifying power, it is difficult to determine. We cannot admit that the imagination *per se* could have been the efficient agent however important the role it played in the occurrence. But come from what condition of the mind, or tendencies of the nervous system it might, this, and phenomena similar in character exist as facts, and it will be wise if the profession give them due attention. They may be very few among the many, yet the principle involved in their production may supply a rationale for the instances which are adduced by empirics as proofs of the efficacy of their nostrums, and prevent the regular physician from being himself misled, or misleading others. A

decided benefit will thus be gained. We will wrest from the ignorant their apparent success. We will make amenable to the laws of philosophical induction what has been vague and indefinite. For however subtle the principles which are operative, they will be mastered by a rigid system of investigation, and as soon as the phenomena become tangible they will not long escape the penetrating power of the medical mind.

Facts, no matter how incompatible with our previous experience and theories, will have to be faithfully registered, and when a sufficient number has been accumulated, then some one will rise to the emergency, and establish the law of their production.

Medical science has always required patient research, and never more so than at the present time ; its foundations are based upon the laws of being, and these laws are bound up with, and modify every change in the organism. And as there is no domain of nature but what may throw light upon our path,the amount of knowledge requisite to become a well grounded member of the profession will steadily increase until it touches the inconceivable. And if the scientists who can stand on the firm earth, and have to deal with matter in its more simple combinations, have still before them vexed problems and long years of patient research, how much greater must be the endurance of the physician who has to determine his certainties amid the shifting sands of life, where the varying phases are all but infinite and the organic forces and mental powers assume protean shapes.

In May Dr. Steves and I went to Louisville to attend the meeting of the American Medical Association. We were most kindly received, and they have responded by appointing six of their number to be present at our session. There is evidence that the meetings of their Association are producing a very beneficial result upon the whole profession in that country ; not only is the tone and standing of the profession raised by the mixing of the leaders and veterans with the general body, but its culture and intellec-

tual attainments force upon the public a truer estimate of its importance. A late President, Dr. J. M. Toner, says: "It must be apparent to all that the concentration of medical thought, and the scientific aspirations of the profession of the country, as expressed through the Central Association, are such that by its unity of action it exercises more influence now over the public and the profession than ever before; or than would be possible without such combined association. This is particularly noticeable in States in which there has been recent legislation affecting the profession and public health." Again "It is a source of sincere congratulation that our medical educational institutions are rapidly enlarging and perfecting their curriculums; and becoming more thorough and efficient in teaching the science of medicine."* Too much importance cannot be attached to the attainments required of the members of our profession, for, "it is our distinction and hope that to secure its largest practical amelioration, society must look mainly *to us*—our range of duty being the whole organization of man in health and disease—psychically as well as physically we alone offer that wider field of new action which an advanced society now requires. All that gives happiness, assuages pain, prevents disease, lengthens life, betters the individual or improves the race—these, the great concerns of living humanity, and carrying with them the principal morals of society, belong to our care. On them we are the only teachers that can speak with authority, or that, by and by, will be listened to with conviction. We alone can make theory on them, give way to demonstration, speculation to ascertained fact, doubt to certitude; and outside our pale there is no teaching nor knowledge that is secular beyond what forms a fraudulent empiricism on one side, and a perilous credulity on the other."—(Medical Times.")

There is a subject which I would submit to the Association for its consideration, and that is, the want of a regis-

*President's address, 1874, at Detroit.

tration of births, deaths and marriages. In some of the Provinces it does not exist, and it will be for you to decide whether a memorial from this Association to the general government will tend to hasten that most to be desired action of the Dominion Legislature.

Case of Peri-uterine Hæmatocele.—By WILLIAM GARDNER, M.D., Professor of Medical Jurisprudence, McGill University, and Attending Physician to the Montreal Dispensary.

(Read before the Medico-Chirurgical Society, Montreal.)

Mr. CHAIRMAN AND GENTLEMEN,—I am induced to bring before you the following case of a somewhat rare disease, one which, hitherto, has not been up for discussion before this Society since its revivification. Apart from this and the fact that the disease has frequently been confounded with other conditions even by eminent surgeons, I have no special features of interest to claim for the subject of the present paper.

Mrs. W., æt., 24, has been married seven years, and had one child at full term, about a year after marriage. She has also had what she supposes were two miscarriages; the first three and the other two years ago. She was not attended on either occasion by any medical man, but asserts that for two or three months previous to each one the menses had not returned, and that she was then seized with sharp intermittent abdominal pain attended with the discharge of liquid blood, and solid ingredients. The bloody discharge continued for three weeks after the last of these two seizures. Shortly after the last miscarriage, two years ago, she had an illness of two month's duration, the main symptoms of which were swelling of legs and feet, and scanty coffee-colored urine. This illness was described by her then medical attendant as inflammation of the kidneys. After this illness her health remained for some time below

par, but otherwise was much as before, that is she suffered from a constant tendency to backache and leucorrhœal discharge. From the date of the last miscarriage till March of the present year the patient has been regular as to quantity and time of appearance of menstrual discharge. On the 26th March and day or two following was unwell; on or about 30th April had very slight discharge with pain lasting an hour or two only. During the last few days of May and the beginning of June had what she calls flooding, accompanied with clots of solid ingredients. This had ceased for a few days when, on the evening of the 5th of June she was seized with severe pain in the lower part of the abdomen. After a few hours this left her and she slept fairly during the remainder of the night; and was able to be out of bed the next day. On the evening of the next day (Sunday 6th June) the pain returned, disappearing as before after a few hours' duration, to again come on, on Monday evening the 7th of June, with greater intensity than ever. I was now sent for, and found her condition to be as follows: she suffers intensely with pain in the lower part of the abdomen and back, causing her to moan continually. The face is pale and has a shrunken or pinched look like that of collapse. The pallor is certainly greater than would be accounted for by the severity of the pain, only. The pulse is weak and rapid, I did not use the thermometer, but feel convinced from the sensation imparted to the hand that it was below the normal standard. Examination of the abdomen reveals enlargement of the hypogastrium equal to that in pregnancy at the end of the fourth month. The enlargement is most marked towards the left iliac region. It is exceedingly sensitive, the left iliac region being especially so. Micturition is somewhat retarded; when making the effort the patient feels as if a foreign body was present in the vagina tending to escape.

On vaginal examination the finger detects the os uteri displaced upwards and forwards behind the pubes. It is neither dilated nor dilatable. The recto-vaginal fossa is

occupied by a moderately firm, elastic, irregular-shaped, and very sensitive mass. This so encroaches on the os uteri as to make it feel like a little pit or depression in the mass. Introduced to the rectum the finger immediately encounters the tumour just described filling almost completely the concavity of the sacrum. The uterine sound enters readily to 1½ inches beyond the normal depth, if its point be directed rather more forward than usual. The sound in the uterus and the hand on the abdomen detect the fundus uteri displaced and lying somewhat to the right side and much less sensitive than that portion of the abdominal enlargement to the left side, which is evidently formed by the tumour.

The treatment and regimen enjoined were perfect rest, in every sense of the word, the avoidance of hot drinks, a diet of cold milk and beef tea, turpentine stupes to the abdomen, and a hypodermic injection of morphia.

June 8th., 10 a.m., the pain was immediately relieved, and commenced to return only an hour ago. The hypodermic morphia was repeated. At 10 p.m. the temperature was 1020, and the pulse 120. Another hppodermic injection of morphia. This state of matters continued without change for three or four days, there being on each day a morning remission and evening exacerbation of temperature with this additional symptom, that on Wednesday, June 9th, there was a reappearance of the bloody discharge which had ceased at the time of setting in of the pain.

June 11th.—The pain is entirely gone, and the temperature normal. There have been neither rigors nor perspirations at any time. The sensitiveness of the parts both externally and internally is very much diminished. The bowels have been moved spontaneously four times.

June 13th, 3 P.M.—Patient is feeling very comfortable, with a normal temperature and pulse of 96. At 7. p.m., pain of same character as before returned with great severity. Saw her at 9.30, p.m. Pain still intense; temperature normal; pulse, 120. Hypodermic morphia, in a fu[illegible] relieved her at once.

June 14th.— Patient has slept all night, the pulse and temperature still normal. The tenderness of the abdomen is more marked than yesterday. There is also some increase of the enlargement, otherwise patient is free from pain and quite comfortable.

June 17th.—Doing well; temperature normal; pulse is still 100. Complains of nothing but some soreness of lower part of abdomen; this is decidedly best marked in the left iliac region. Here there is a distinct elastic tumour, very sensitive to pressure. There is now a fœtid vaginal discharge, resembling in odour that present in cases of retention of portions of placenta or fœtal membranes. This odour is very persistent in the examining finger, lasting for many hours, notwithstanding repeated washings with a solution of Condy's fluid.

June 27th.—Has steadily improved since date of last report. There has been no pain, and the abdominal tumour has been reduced in size very considerably, the same is to be said of that to be felt in the recto-vaginal fossa. There is no difficulty in micturition. The temperature is normal; the pulse remains rapid, 90 to 100; appetite improving. The vaginal discharge continues but is very much diminished in quantity.

July 17th.—Patient is menstruating, the only unusual symptoms being rather a free flow with some pain in the back. The flow, it may be remarked, continued three days. In other respects also the patient is doing well.

July 23rd.—Patient has been up for some days; expresses herself as well but weak; no pain or difficulty in micturition. The bowels are regular, the appetite good. Sleeps well; has neither rigors nor perspirations; the pulse is still rapid, 90 to 100. I am, however, inclined to think that her normal pulse is considerably above the average. The abdominal enlargement has almost disappeared. There is still a little tenderness in the left iliac region; none elsewhere.

Vaginal examination reveals the continued presence of

the tumour in the recto-vaginal fossa, but it is firmer in consistence, reduced considerably in size, and decidedly less sensitive. The os uteri has nearly regained its natural position in the pelvis. The uterine sound enters to the depth of about three inches only, or nearly three quarters of an inch less than at the time of commencement of my attendance.

The conjunction and sequence of the symptoms in the case just described have left in my mind no doubt that they were those of effusion of blood in the pelvis.

The questions naturally arise—Whence the source of this effused blood? and into what part or cavity was it effused?

It would not be possible to say decidedly where the effused blood was situated, but I think it is more than probable that it was in the cellular tissue of the pelvis, rather than in the cavity of the peritoneum.

I have come to this conclusion from the tension of the swelling, the firm way in which the uterus was fixed, almost immovably against the walls of the abdomen, and the circumscribed character of the swellings, as felt behind the uterus and to its sides through the posterior vaginal *cul-de-sac.*

The question of the source of the blood is one more difficult to anawer. The effused blood in pelvic hæmatoma, or hæmatocele, comes from a variety of sources. As a matter of fact in rupture of blood vessels into any part of the peritoneal cavity the blood will gravitate and occupy the most dependent portion of the pelvis, viz: the retro-uterine or Douglas's fossa. The source of blood may thus be rupture of cysts, of aneurisms, of the gravid uterus, of ovarian or Fallopian gestation-sacs.

A fatal case of rupture of a Fallopian tubal gestation-sac was brought before the December meeting of the Obstetrical Society, London in 1873, by Dr. D. C. MacCallum, Professor of Midwifery in McGill University.

Sudden large effusions of blood are most likely to have been brought about in one of the ways just mentioned,

which are also the sources of those forms of hæmatocele which occupy the peritoneal cavity—the most dangerous and rapidly fatal forms of the disease. Other sources of bleeding into the peritoneal cavity which would in these cases be apt to be more moderate in quantity than when due to the above sources, are, that which may occur from the ovary after the escape of an ovum under unusual vascular excitement, which may be due to many causes augmenting the condition of physiological erethism attendant on the performance of this function; and retrocession of menstrual blood from the cavity of the uterus through the Fallopian tubes. The last mentioned variety can only occur from sudden large outpouring of blood from the uterine mucous membrane (or as some assert from the the lining membrane of the Fallopian tubes themselves) together with obstruction to its outward flow, from complete occlusion due to atresia of the cervix, or great narrowing of the cervical canal from anteflexion or other morbid condition.

Hæmatocele, from the cause last described, is probably rare,—certainly the uterus often becomes distended with catamenial fluid, prevented from escaping by obstruction, without any such result occurring.

In the case just reported no such cause could operate, as the cervix uteri was perfectly patent.

Another source is rupture of some varicose vein. The veins of the pelvic sexual organs are large and numerous, and liable to become varicose from various causes. Those of the broad ligament are often large and varicose in women who have borne many children, or in whom the uterus remains in a condition of subinvolution, and chronic congestion. Sometimes, indeed they are so congested as to present a dark purple appearance. If in this condition the veins of the broad ligaments give way, which they are apt to do from the little support the receive from the loose tissue by which they are surounded, then effusion of blood takes place into the peritoneal cavity. The coats of the

veins may, however give way without any laceration of the peritoneum, and the blood is then extravasated into the loose cellular tissue in the broad ligament and immediately surrounding the middle and lower part of the uterus. The last is, I am inclined to believe, the cause which operated in the present case,—and this especially when it is remembered that my patient had been subject for years to leucorrhæa, and chronic backache, both giving evidence of congestion of the uterus and its appendages.

The possibility of abortion having occurred especially in view of the history of menstrual irregularity for two or three months previous to the accession of the hæmatocele, and the enlarged condition of the uterus as indicated by the abnormal depth to which the sound entered must not be forgotten. If so it probably operated as an exciting cause to rupture of varicose veins.

Peri-uterine hæmatocele has often been confounded with other diseases. Barnes asserts that until the last twenty years almost every cause of the disease was confounded with inflammatory effusion, and even now many are slow to admit the evidence upon which its existence is established. In 1850 the disease was so little known that Malgaigne attempted to enucleate a supposed fibroid tumour of the uterus which proved to be a collection of blood. Again, Scanzoni in his work on "Chronic Metritis," issued in 1863, says: "We regret not to be in a position from personal experience to speak of this disease, for in our certainly extensive and protracted observation we have not been able to diagnose peri-uterine hæmatocele in a single case." The diseases from which we are especially to diagnose pelvic hæmatocele are pelvic cellulitis and peritonitis and retroversion of the uterus. The diagnosis not rarely resolves itself into settling the question as to which condition, hæmatocele, or pelvic cellulitis or peritonitis came first; the effusion of blood is exceedingly apt to induce inflammation. So that in any case what is now pelvic cellulitis, or peritonitis, may have begun as hæmatocele.

Sudden intense pain of the lower part of the abdomen, with pallor, cold sweating and rapid pulse, in short, collapse, without previous rigors, these are the symptoms of internal hæmorrhage, and they are of especial significance when they occur during or after abortion, or about the menstrual period, in persons who have a history of chronic ovarian or uterine trouble.

In pelvic cellulitis the patient has generally been recently delivered or has aborted. It sets in with rigors followed by pain less intense than in hæmatocele. In hæmatocele the pain is the first symptom and is very severe at the outset. The swelling or tumour in hæmatocele is, as a rule, larger, displacing the uterus ; it is also softer at first, and as it diminishes in size it grows harder until it finally disappears. It is also almost always, ante, or retro-uterine. In pelvic-cellulitis the tumour is at first hard, then becomes soft and fluctuating as suppuration occurs ; it is, moreover, nearly always one-sided.

With regard to treatment, on certain points all authorities are agreed, on others there is great difference of opinion. During the period of effusion of blood, and for some time after, absolute rest in bed, the avoidance of hot or stimulating drinks, the application of ice-bags to the hypogastrium, maintaining the functions of the bladder and rectum, and the giving of opium in quantities sufficient to relieve the pain and quiet the nervous system, are seemingly the most important indications.

The question as to the propriety of tapping is one in which there has been and still exists great difference of opinion, eminent names being ranged on both sides. The correct position to take in this as in most others in which difference of opinion prevails is probably one of eclecticism. If the tumour be of moderate size, and produces but a moderate amount of distress easily controlled by opium, it is better to leave it to nature. Such a course is to be recommended in cases such as the one now reported.

But if the tumour be large, and especially if there be

symptoms of irritative fever or septicæmia, we must then think of puncture. In cases where the tumour is producing alarming symptoms from its size only, the aspirator should be used for tapping, so as to prevent the admission of air. But if there be evidences of suppuration and septicæmia or pyæmia, then a free incision ought to be made and the clots removed with the finger, after which the cavity may be injected with solutions of iodine, carbolic acid, or Condy's fluid. The site of selection for the puncture is usually the protruding part of the tumour in the vagina behind the cervix uteri, and the trocar or bistoury is plunged into the swelling in a direction parallel with the axis of the uterus.

Case of Polypus in Utero.—Course, Duration and Treatment By J. T. MOORE, M.D.

Mrs. C., a married woman, aged about 30, with light complexion, blue eyes, and of average height: about five feet four inches, first came under my notice on the morning of the 22nd of last April. The following is a history of her case, as given by herself up to that time. She is the mother of three children, the youngest being about two years old. In the latter part of December, 1874, she was taken with a severe pain in the right illiac region, extending across over the fundus uteri; shortly afterwards hæmorrhage commenced per vaginam. A medical man was sent for who had previously attended the family (a Homœpath). He diagnosed the case as nothing serious, and left some medicine, the chief part of which was hamaduelis-virginica or the active principle of witch hazel; this is considered one of their strongest anti-hæmorrhagics The case progressed, and he continued the treatment up to April 21st, 1875. She lost more or less blood nearly every day during the intervening time, never missing over three days at a time. On the night of the 21st of April, she had a severe syncopal attack, such as is often produced from extreme loss of blood, which lasted about two hours; under light stimulants she revived, and

on the following morning I was sent for. I found her in a very low state, not able to turn herself in bed; very anæmic and emaciated. Lips and nails had a bloodless appearance.

Unfortunately, I am unable to give the state of her pulse or temperature, as I am now writing from memory some three months after recovery of the patient.

On examination I found great tenderness along the line of right fallopian tube, extending to right ovary. Uterus rather low down in vagina, and slightly antiverted. Discharge very fœtid and disagreeable. She complained of severe pain in right illiac region, which seemed to be in a measure paroxysmal; when these paroxysms came on she suffered from nausea and vomiting. Free emesis seemed invariably to ease the pain.

Treatment.—I put her on following mixtures:

℞. Quinine Sulph. ℥ss; Tinct. Ferri. Mur. ℥iiss.; Aquae Purre, ad ℥iv. Sig. Take a desert spoonful every fourth hour, alternated with—

℞. Extract Ergotæ Fl.; Acidi Gallicia a ℥i; Syrupis Simpl. ad ℥iii. Sig. Shake well, and take a desert spoonful every fourth hour.

Also ordered injection, Liq. Ferri Persulph, one part to eight of water. Used Quinæ on account of the prevalence of malaria in this section. Diet regulated.

In a short time I found she could not tolerate the Iron mixture. I then tried in turn the sacharated Carb. Ferri, Amonio Sulph. Ferri. and Ferri. Ferro. Cyanidi. but all with like results. After a few doses of each the stomach would become perfectly intollerant, and a peculiar idiocyncracy was shown throughout which prevented any assistance from this valuable drug.

During this time, however, the hæmorrhage became less severe, and the patient improved in strength.

I now concluded there must be some local trouble within the uterus, upon which the major part of the symptoms de-ended. I therefore determined to dilate the os uteri, so

as to enable me to make a thorough examination. I made a number of (graduated sizes) carbolized sponge tents ; commencing with the smaller, I introduced one every 48 hours, leaving them in 24 hours. After using the fourth I found I could carry two fingers through the cervix uteri. Upon placing the patient in position, I made a digital examination, and found a growth high up on the right side of fundus just behind the junction of the right fallopean tube, which I diagnosed to be a riband-shaped polypus. It was impossible to remove it without further dilitation. I then used two very large-sized tents intending to remove the growth with the craseur. On removing the last tent I observed some clots following it, and when prepared to use the instrument, what was my surprise to find the growth had entirely disappeared. I could only account for it as having sloughed off from pressure of the two last large tents. From this time the patient commenced convalessing, showing only for a few days slight pain in the region of the uterus She went four weeks until her usual time for being unwell, and has passed three periods with regularity, seemingly enjoying good health. She is now able to walk about the town, and is regarded by everyone as having almost miraculously recovered from a severe and fatal illness.

REMARKS—I. What peculiar connection seemed to exist between the uterus and the stomach? Did the severe pain from the uterus cause nausea? If so, why did the vomiting ease pain? Or was nausea and vomiting an accidental complication.

Was the tenderness along the right fallopian tube caused by irritation or inflammation, extending along within the tube from seat of the tumour, which was in close proximity to the ostium internum?

Port Burwell, August 13th, 1875.

Hospital Reports.

MEDICAL AND SURGICAL CASES OCCURRING IN THE PRACTICE OF THE MONTREAL GENERAL HOSPITAL.

Case of Acute General Tuberculosis.—Fatal by Meningitis. Under DR. ROSS. Reported by Mr. R. L. MACDONNELL.

S. B., æt. 14, was admitted into the Montreal General Hospital on the 15th August, 1875, under Dr. Ross. She is a strong and robustly-built girl, though small for her age, and has been for the last seven years an inmate of one of the charitable institutions in this city. Nothing could be learnt of her family history.

Her illness began rather suddenly, nine days ago, with fever and feeling of great weakness, together with great pain in the back. This was soon followed by some vomiting (easily however, controlled) and some headache. She then became very restless, somewhat delirious at night, frequently waking sharply and giving a sudden loud scream, with complaint of her back—sometimes of her head. It was then noticed that she squinted. She was seen by Dr. Ross on the afternoon of the 5th, and was removed to hospital the same day.

Aug. 6th.—She now lies in a very drowsy condition. Can, however, be roused to partial consciousness by being spoken to. Head continually directed to the right side, and eyes half shut. There is decided strabismus and very frequent spasmodic movements of the right eye. Right pupil slightly more dilated than the left. Both act very sluggishly with light, and oscillate considerably. Neck stiff but no retraction of the head. If the head be moved, she screams and cries out, "Oh! my back." Pulse 68.

Ordered. Head to be shaved, and bladders of ice to the head, and the spinal ice-bag to be applied, and to take tass. Iodid. gr. x every four hours.

Aug. 7th.—Passed a bad night. Screamed a good deal. More drowsy. Drooping of right upper eye-lid. More dilatation of that pupil. That eye more stationary; pupils do not act. Abdomen retracted. Cerebral maculæ of Troussean particularly well marked. The opthalmoscope showed all the retinal vessels intensely congested. Pulse in the morning 68; in the afternoon, 108. Temperature 101°.

Ordered. Calomel, gr. 5, to be followed by Black Draught.

August 8.—Had two severe convulsions yesterday evening, and to-day is profoundly insensible. Marked ptosis on right side with corresponding pupil widely dilated. Pulse in the morning 104; temperature 100·6, in the evening pulse 128; temperature 101°.

August 9th. Comatose and livid, with noisy breathing, pulse, 130; temperature, 101°6. Died this afternoon.

Post mortem, eighteen hours after death.

Vessels of scalp congested and bleeding freely on being divided. Cerebral veins of the convexities gorged to their utmost extent with blood. Considerable effusion of serum beneath the arachnoid. At the base of the brain this membrane was found thickened and opaque. Similar patches of thickening with slight deposit of lymph being also noticed along the line of some of the congested vessels. The commissure of the optic nerves, and the roots of both third nerves were imbedded in a deep mass of gelatinous lymphy deposit. It was thicker and more opaque over that of the left side. No distinct evidence of tubercle could be found in this region, but a quite decided granular condition of the vessels was noticed, especially at the inner extremity of and passing along the fissure of Sylvius. Puncta-vasculosa numerous and distinct. Corpus Callosum wanting in firmness. Fornix very much softened. Ventricles considerably distended, and containing about 4 oz. of limpid serum. No signs of softening in any part of the ventricular walls. Choroid plexuses extremely congested. Velum Interpositum opaque and thickened [illegible]

with minute specks of miliary tubercle. Spinal cord and its envelopes, normal—arachnoid especially being clear, transparent and unaffected.

Heart and pericardium healthy. Pleuræ adherent at several points by fine bands, and their surfaces sparsely studded with a number of fine miliary tubercles, grey and hard. The Lungs also contained in their substance a small quantity of similar tubercles, which were found aggregated together into a small mass at the apex of the left lung.

Miliary tubercles were also found in the capsules of the kidneys,—a few in the structure of these organs—in the peritoneum, on the surface of the liver and in the capsule of the spleen.

Case of Ulcer of the Stomach. Death, Autopsy. Under the care of Dr. DRAKE. Reported by JAMES C. CAMERON M.D., House Surgeon, Montreal General Hospital.

A. Q, æt 17, admitted to Hospital 30th May 1875, complaining of vomiting and great prostration. Three days previous to admission she had vomited a large quantity of dark blood, chiefly in clots. Had never vomited blood before, and has not done so since. She has suffered from pain in the epigastrium, constant nausea, occasional vomitting of glairy frothy mucus, and a disinclination for food. Her menses have been irregular for some months. Her appearance is very anaemic; lips and cheeks blanched, eyes clear and prominent; she has lost flesh and seems much debilitated; her expression is languid and apathetic and her manner taciturn. Upon examining her carefully she complained of a burning pain in the epigastrium, of a constant desire to vomit, which was greatly increased after partaking of any food. Pulse regular but weak; heart sounds quite natural; bowels constipated. Dr. Drake diagnosed the case as one of ulcer of the stomach, and accordingly put her on the following treatment: A pill of argent nit gr. $\frac{1}{4}$, rph. acet. gr. $\frac{1}{24}$, P. tragacanth co. q. s. An enema

of castor oil and turpentine at once, the epigastrium to be painted over with collod. cantharidine. Milk and beef-tea, iced, to be administered every half hour, one tablespoonful at a time; ice in small pieces to suck; no solid food to be on any account allowed. Notwithstanding every care, the irritability of the stomach still persisted; so, on the 1st of August Dr. Drake ordered an enema of beef juice and brandy to be administered every two hours, nothing but ice being given by the mouth. This treatment was kept up for two days and nights; the nausea and vomiting ceased, the pain in the epigastrium disappeared, her general appearance began to improve, she seemed more lively and in much better spirits, and the color returned somewhat to her lips and cheeks. She felt so much better that she begged to have the injections discontinued, and to be allowed some food by the mouth. Accordingly, on the 3rd of August, milk and beef-tea, iced, were administered in small quantities as before, and fer. carb. sacch. grs. xv ordered to be given three times a day. All went well till the evening of the 4th, when about nine o'clock she complained of a sharp pain in the epigastrium; all food was at once stopped, enemas were again administered, and ice given freely; but the pain persisted, and nausea returned.

On the 5th the pain became so great that an hypodermic injection of morphia had to be given; the relief, however, was only temporary, and during the course of the day she became quite insensible; vomiting, convulsive in character, set in; no blood was brought up, only a frothy mucus. She lingered during the night and died early on the morning of the 6th, exhausted.

Autopsy.—Rigor mortis well marked; the body was quite anaemic. Stomach, pale and anaemic; no perforation; upon the lesser curvature, about two inches from the cardiac orifice, a small, circular punched-out ulcer was found about the size of a five-cent piece. The mucous coat was quite eaten through by it and the walls much thinned. The base of the ulcer was slightly congested.

On the posterior surface of the stomach there were two large patches of ulceration of quite recent origin, the mucous membrane being softened but not wholly destroyed. These patches were separated from each other and from the small deep ulcer by healthy mucous membrane; they did not communicate at any part. Between the small ulcer and the cardiac orifice was an old cicatrix, much hardened and thickened, marking the site of an old ulcer, which had undergone spontaneous cure. The lungs and other viscera were anaemic, but otherwise healthy.

Case of Apoplexy into the Pons Varolii.—Under the care of Dr. GEO. E. FENWICK. Reported by J. D. CLINE, B.A., M.D., Assistant House Surgeon, Montreal General Hospital.

J. E., a sailor, aged 50, was brought into hospital on the 7th of August. Scarcely any history could be got of his previous condition. His shipmate who brought him said that he had been in the same state as he was then during nearly the whole voyage, which was about two weeks; that he had fallen suddenly into this state, and had been left to himself, and very much neglected. He was very filthy. He could walk with help. Could only be roused by a loud tone to reply to the simplest question. Could scarcely be induced to swallow anything. Wanted to sleep all the time. There was no paralysis, but all the movements which he could be induced to make were very sluggish. Would draw up his legs slowly when pinched. His pupils were not dilated, but responded very slightly to the stimulus of light. Temperature was normal in the axilla, but extremities were cold and pulse slow, between 60 and 70, and very soft. He evacuated his bowels and bladder unconsciously four times while in hospital, which was during 48 hours. The only thing done for him was the administration of stimulants. He became gradually weaker and more comatose, and on the day of his death could not swallow at all. Before his

death, at 2.30 a. m., he had two convulsions, the first at 11 p. m., and the other immediately before death.

Autopsy.—There was great congestion of all the visceral organs, lungs, liver, kidneys and spleen, and of the brain andits membranes, some serous effusion into the ventricles, and a large clot of blood, involving nearly the whole of the substance of the pons varolii, and mixed with the *débris* of its broken-down tissue.

Periscopic Department.

SURGERY.

The Dangers of Operating on Habitual Drinkers.

Sir James Paget, in his recently published Clinical Lectures, says, (pp. 14 and 15): "One does, indeed, sometimes meet with habitual drunkards who pass safely through the perils of great operations; but these are rare exceptions to the rule, according to which one may reckon that the risks of all operations increase with the increasing degrees of habitual intemperance. I think you will find that a habit of slight intemperance is much worse than occasional great excesses; that regular soaking is worse than irregular carousing; probably because of the steady impairment of the blood and of all the textures to which the soaking leads. Of course you will keep your hands off notorious drunkards, unless you are driven by the stress of a strangulated hernia, or a stopped windpipe, or something leaving you as little choice as they do. But you must be on your guard to detect a good deal of drunkenness of the soaking kind, which is not notorious and not confessed. Be rather afraid of operating on those, of whatever class, who think they need stimulants before they work; who cannot dine till after wine and bitters; who always have sherry on the sideboard; or who are always sipping brandy-and-water; or are rather

proud that, because they can eat so little, they must often take some wine. Many people who pass for highly respectable, and who mean no harm, are thus daily damaging their health, and making themselves unfit to bear any of the storms of life.—*The Doctor.*

Operation under Chloral Hydrate.

Drs. J. S. Nairne and Alexander Nairne employed Chloral as an anæsthetic during the removal of a metatarsal bone from a child three years old. They describe the mode of administration in the *Glasgow M. J.* Of an aqueous solution of chloral, of which 20 minums contained 12 grains, they injected subcutaneously 10 minims at 10.30 a.m. No effect at 10.38. Ten minims more injected at 10.40. At 10.45 drowsy. At 10.55, 10 minims more injected: patient sleeps, and if awakened falls asleep again in a moment. At 11.05, 10 minims were administered by the mouth; pinching makes her cry, but she sleeps again immediately. At 11.15, 10 minims more by the mouth. At 11.20 she was in a deep sleep; pinching did not wake her, and the operation was performed. During its performance she began to cry as if dreaming, but left off and was fast asleep the moment it was over. She was allowed to sleep for two hours, and then made to drink a cupful of strong tea, three-quarters of an hour after which she sat up, looking dazed, but unterrified, and oblivious of pain. Drs. Nairne tell us that the solution of chloral was too concentrated, that it made deep wounds afterwards, which, however, healed up well enough; but we may observe that a much weaker solution is apt to produce ulcers, which do not always so readily heal. Drs. Nairne add that they proposed to inject strychnia subcutaneously in cases of an overdose of chloral, as they have found it make chloroformed animals brisker. They have also found a few drops of an aqueous solution of strychnia (2 grs. to the ounce) remove the nausea and vomiting which sometimes follow the inhalation of chloral.

It will be observed that nearly an hour was consumed in administering the chloral, that even then the anæsthesia seems to have been imperfect, and that ulceration followed at the points of injection. Moreover as it is by no means clear that the method is less dangerous than the inhalation of chloroform or ether, it is not likely to commend itself to other practitioners.—*The Doctor.*

MEDICINE.

Ergot in the Treatment of Increased Mammary Secretion and Inflammation of the Breast.

Dr. J. Sehtscherbinkenhoff (*Centralblatt fur Chirurg.*) has had his attention drawn to the influence of ergot on the mammary gland.

During an epidemic of ergot poisoning, he observed that in nursing women there was frequently an entire cessation of milk when symptoms of ergotism appeared.

The same phenomenon was observed among cows fed with meal containing ergot.

Regarding the accumulation of milk in the glandular parts of the breast as the chief cause of mastitis, he administered ergot in many cases in which this process was in an early stage, with the happiest results. Further, during actual inflammation of the gland, the use of ergot was attended with speedy recovery. At time of weaning, the ergot caused a speedy cessation of the lacteal secretion.—*The Doctor.*

Ovarian Compression in Hysteria.

Prof. Charcot sets out with stating that in the great majority of instances of hysteria there is an aura which starts from one ovary, sometimes both. And he further insists that it is only needful to maintain a decided pressure over the affected ovary in order to suspend the attack. This result, it seems, M. Charcot realized fully in a case of hys-

teric epilepsy. Whenever he compressed the left ovary, the hysteric symptoms disappeared. When the pressure was relaxed the symptoms returned. The compression is the same as that which is made use of when the iliac artery is compressed. The practice, if only its success shall be confirmed, seems calculated to be of use.—*The Doctor.*

Chronic Aortitis.

M. P. Jousset has communicated to the Paris Academy of Sciences the result of his investigations into chronic inflammation of the aorta, which he regards as a frequent disease, habitually misunderstood and confounded with heart disease or even with interstitial nephritis. The principal lesions are atheromata, milky and chalky patches, thickening and loss of elasticity of the walls, and finally, dilatation of the artery. The inflammation may spread from the arterial lining to the endo-cardium, or the reverse may occur: thus arises cardo aortitis. As concomitant lesions he mentions premature ossification of the peripheric arteries and sclerosis of the kidneys. M. Jousset speaks of two forms of aortitis—one painful, known as angina pectoris; the other painless, or nearly so, which has been the chief object of his study.

The chronic may be preceded by an acute aortitis, and alcohol, tobacco, coffee, and tea favor the development of the disease. In all the cases observed by M. Jousset the patients were over thirty-five years of age, and either gouty or the subjects of hæmorrhoids. The principal symptoms are habitual dyspnœa, with occasional paroxysms of suffocation, which have all the characters of cardiac dyspnœa. The pulse is accelerated, and at the same time becomes small and at length imperceptible. Cold sweats and syncope supervene. During the paroxysms the expiration is convulsive and prolonged. Sleeplessness, debility, and anæmia lead to a cachexia marked by œdema, albuminuria, and sub-delirium. Death takes place from syncope, asphyxia, or uræmic poisoning.—*The Doctor.*

Preventive Measures in Syphilis.

Mr. Acton recently read a paper before the Royal Medical and Chirurgical Society of London, from which we make the following extracts:

His paper commenced by stating that when he returned to England, after the completion of his studies in Paris, he was greatly struck with the severity and number of cases of syphilis in London, as compared with Paris, and as a consequence of this he brought the subject before the notice of the society in 1846, and again in 1860, showing that the Belgian and French troops were much less attacked by venereal affections than the English. In 1873 he found that in districts in England where the troops were not what he called protected from the women, primary syphilis existed in the proportion of 123 per 1,000 men annually He maintained that syphilis could be prevented and stamped out by providing ready means of ablution, and destroying the local form of contagion, and warning male patients not to infect other persons. The institution of hospitals whether free or otherwise, was one remedy, for treatment of prostitutes as out-patients was quite inadequate. They should be segregated as soon as diseased, and not allowed to leave hospital until they are quite cured. By doing this, as at Hong Kong and Dartmouth, the disease had been reduced to a minimum. In his visit to Brussels, in 1874, Mr. Acton had visited the Military Hospital, where he found only three cases of syphilis among the private soldiers, and two among the non-commissioned officers, out of a body of 3,500 troops. There were only nine women confined to hospital for venereal disease, showing that in Brussels the police inspection had nearly stamped out the disease. In Paris he visited the military hospitals, and could only discover six cases of primary disease, and eight of secondary syphilis, among 3,841 men forming the garrison of Paris. Disease among the females was very slight also, and Mr. Acton attributed this decrease to the police regulations.

He gave a table showing that in the St. Lazare Hospital he only found 23 cases of primary disease among 202 patients in this prison, which is under the police surveillance. With respect to England, Mr. Acton said that Parisian medical men alleged that British travellers, like sailors, were the cause of much of the disease, and that the disease would ere now have been stamped out had it not been that England and other similar countries went on continually introducing fresh cases into Paris. In London he found 24 cases of primary disease among 408 single soldiers in the 2nd Battalion of the Coldstream Guards quartered in London. In the first battalion of the Scots Fusilier Guards he found 25 cases of severe forms of syphilis among 505 unmarried men. He handed in a table extending over a year. which showed that one-fifth of the whole number of troops quartered in London in 1874 were affected with primary sores, which would have incapacitated the men from duty for a period of six weeks on an average. Perhaps 164 of these men would have secondary disease, requiring mercury, which would further incapacitate them from duty for a period of two months or so, and this would debilitate them greatly. Comparing the syphilitic affcetions of the Foot Guards with those among the troops quartered in Paris, he showed that 500 troops in London had more disease than 3,841 quartered in Paris. Mr. Acton considered that one-half the prostitutes in London were diseased; whereas of those in the districts under the Contagious Diseases Acts only about 8 per cent. were found affected at periodical examinations. It appeared that at Woolwich, during 1871-2-3, only 1,085 cases of primary sores were treated in hospital, out of a garrison of 18,250 men, or only one man was infected in 17 soldiers, instead of 1 in 6, as in London. He therefore in conclusion, looked upon the advantages of supervision of prostitutes as no longer a problem, but as an undoubted fact.—*St. Louis Clinical Record.*

Physic in Food.

Watercress has long had the popular reputation of being a powerful antiscorbutic. Probably all the *Cruciferæ* eqully deserve this title. M. Dupuy says that the plant contains an essential oil of which sulphur forms a constituent, and that he has also discovered in cress—iodine, iron, a bitter extract, and phosphorus. He therefore adds these minerals to the soil to increase the quantity in the plant and then prepares s *succus*. He has established cress-gardens for the culture of this plant in order, as he says to vegetabilise (!) the minerals which gave it such important properties.

This reminds us that long ago an Italian writer proposed to obtain iodized milk for his patients by feeding cows on hay sprinkled with a solution of pottasium iodide. We wonder if the cows would like the flavour- More recently an English writer says that the cows on the Island of Ushant, off the coast off Brittany, feed principally on sea-weed, and that consequently their milk is particularly rich in iodine ; and it is proposed that this milk be used for the cnre of diseases benefitted by iodine, as it does not produce the constituional disturbances that often result from the administration of iodine in other forms.

Last of all it has been reserved for a French Physician to iodize eggs by eleetricity. The arrangement employed can be easily understood when we say that he conveys the iodinein to the egg by what we may call electrolysis

By any of the above methods physic is to be put into the food of invalids without imparting any disagreeale flavor.—*The Doctor.*

Note on Salicylic Acid. By EDWARD R. SQIBB, M.D., Brooklyn, N.Y.

This substance long known as a rare and curious chemical derived from the vegetable kingdom, has lately been brought into prominent notice, chiefly in Germany, from its relation to those changes which are commonly known, and best understood as fermentations, to which class or kind of

changes so many diseases and pathological conditions are now prettty well known to belong. The writer knows far too little of the subject and its relations to attempt an accurate or exhaustive paper upon it, and the object of this note is simply to call attention to it, that it may be read up in the current literature—to give a brief outline of its bibliography, that reference may be made in regard to its history—and to offer some thoughts in regard to its sphere in medicine.

Salicin is a glucoside, or neutral vegetable principle discovered by Leroux in 1830, in the bark of some species of willow, *Salix*, whence its name. It was afterwards found in various species of poplar, and in other trees and plants. Salicin was chiefly investigated by Piria who gave an elaborate account of its derivatives, and among these of salicylic acid. Early in its history the acid was prepared by Lowig and Weidmann from the flowers of *Spiræa ulmaria*; and later, a research by Prof. Proctor, of Philadelphia, showed that our oil of wintergreen, *Gaultheria procumbens*, was really a salicylous ether; and from this source salicylic acid was obtained by Cahours. Gerhardt, Ettling, and others contributed to the researches by which the properties and reactions of salicylic acid were accurately determined and its composition fixed; but as yet it was a chemical curiosity whose potential possibilities were quite unknown. It still belonged to that class of substances which had simply consumed a large amount of patient labour, and in relation to which the rigid utilitarian asked Michael Faraday "What is the use of such things?" and received for reply the answer. "What is the use of baby?"

The physiological and pathological effects of salicin though imperfectly investigated, seem to have gradually and slowly directed attention to those of its derivatives, and occasional paragraphs have appeared in current scientific literature, from time to time, upon salicylic acid for some years past. But only within a year or two—and the writer regrets that he does not know by whom first—German

writers have alluded to its peculiar and powerful effects as an antiferment, and antiseptic. As its peculiar powers are recognized, and its importance become possible and probable, the sources from which it had been obtained as a chemical curiosity became impracticable, in consequence of the small quantity which could be obtained from them, and the great cost in material and labor.

The next step in the progress of salicylic acid toward practical utility affords an excellent illustration of the progress in chemical knowledge made of late years.

The modern chemist appears to know, within certain limits, the combinations of the elements in organic substances very much as he knows the axes of crystals, and hence deduces their planes of cleavage. That is he knows how they will split up under given conditions, and what new arrangements of their elements are possible or even practicable. And further, he knows by pure reasoning upon facts, what new elements to introduce between the molecules of one combination to split it up by a new set of affinities into new combinations never before seen or reached, and which would have remained long unknown under the mere empirical researches of the older chemistry. The peculiar properties and reactions of salicylic acid as an antiferment producing a demand for it, the German chemists, Kolbe and Lautemann, sought for an organic compound which from its elementary composition might be split or dissociated into the desired new compound salicylic acid. This substance, whose molecule might be broken up, they found in phenol, or the so called carbolic acid, and it is a very curious circumstance—purely accidental so far as this writer knows—that a substance of well and long established character as an antiferment, should have offered to these chemists a molecular constitution so well adapted to be broken up into a still more powerful antiferment; for there is no relation whatever, either in composition, or chemical, or physical properties between carbolic acid and salicylic acid, except in their effects as antiferments, and the two may,

so far as present knowledge extends, accomplish these effects by similar, or by altogether different reactions. The agent which the German chemists selected to resolve the molecule of phenol into other molecules, one of which should be salicylic acid, was dry carbonic acid or carbonic anhydride as it is called in the new chemistry. Thus from the action of carbonic acid on carbolic acid, salicylic acid is produced, a process which is about as far from the original willow tree as a source of the acid as can well be imagined, and yet a process which is as much the result of human knowledge based upon human research as that by which Le Verrier and Adama discovered the planet Neptune. It appears that where phenol or cresol, and perhaps others of the class of phenols, are combined with an alkali metal such as sodium or potassium thus forming phenol-sodium (often called phenate of soda) for example, and well dried carbonic anhydride is passed through the dry powder of phenol-sodium heated to 100° to 250° C.=212° to 482° F., the reaction occurs which produces salicylate of sodium and other compounds. The salicylate of sodium thus formed is dissolved in water and decomposed by hydrochloric acid which uniting with the sodium by superior affinity, sets free the salicylic acid in the forms of small crystals. These crystals are washed and re-crystallised from a hot solution, and when dried form a crystalline powder of a light brown colour, somewhat resembling in colour the powder of pale cinchona bark. This is unbleached salicylic acid, and is probably pure enough for almost all, if not for all, the purposes to which the acid is at present applied to practical uses. The small proportion of colouring matter which it contains in this condition is held by it with great tenacity, and the future processes by which it may be obtained of various shades up to whiteness are so difficult, troublesome, and expensive, that they more than double the cost of production. This bleaching may be accomplished in various ways to a certain extent, but to get the acid quite white, Kolbe recommends that it be converted into an ether,

and this ether be again decomposed. In the writer's practice no good plan of decolourising has yet been reached, and as the decolourising has not yet been shown to be necessary or very useful, no great attention has yet been given to it. The acid imported from Germany at very high prices is occasionally quite white; but most of that sold at the more moderate prices of 2 to 3 dollars per ounce is of various degrees of whiteness, up to a very light cream colour with a reddish tinge. These varying shades of colour seem to show that bleaching processes, more or less effective, have been used with all the acid yet imported into this country; while, so far as known, none has been made here until the writer lately undertook it. Hence the entirely natural, or entirely unbleached acid, has not, so far as known, been yet used to any considerable extent; and it is a mere reasoning process based upon the quantity and qualities of the colouring matter in the well-made unbleached acid by which it is inferred that for most, if not for all of its present uses, this is as good as the more or less bleached product. If the well-made unbleached acid be found to subserve all the useful purposes to which the substance may be applicable, as is confidently expected by this writer; and if the substance of its importance in the arts, and in medicine, as indicated by the European authorities, the process of Kolbe will make it practically attainable in the necessary quantities at a far lower cost; whilst without some such process it would be of very limited use to mankind, whatever might be its powers. Whether bleached or unbleached, the acid is in minute broken aciculàr crystals, which give it the appearancs of a granular powder, soft and smooth under the pestle or knife, but somewhat rough or resinous when rubbed between the fingers. This powder is inodorous and nearly tasteless. It has, however, a sweetish and astringent after-taste with slight acridity in the fauces, but none in the mouth; and though tasteless, it leaves a disposition or inclination to expectorate, which continues for some time

It is practically insoluble in cold water, but is very soluble

in hot water; and the water of a hot solution retains when cold, in proportion to its coldness, from about 1 part in 250, to 1 part in 500 of the solution. The presence of various neutral salts in small proportion in the water render it far more soluble. Up to this time phosphate of sodium seems to have been chiefly used in Germany to render it more soluble in water for medicinal purposes, and it is said that 3 parts of phosphate of sodium will render 1 part of the acid easily soluble in 50 parts of water. It is much more soluble in alcohol and ether than in water. It melts at about 125° C.=257° F., and sublimes at about 200° C. =392° F.† In common with other similar acids it forms salts with the principal bases, but these seem thus far to be difficult to make, and their effects have not been investigated.

It is used for medical and surgical purposes either dry or in solution. When used dry it is sprinkled on to wounds, ulcers, or dressings in the form of very fine powder, in very small quantities, either simply powdered or mixed in various proportions with some diluent, such as starch. When used in simple solution either for spraying surfaces, or for washes or gargles, it is used in tepid solution of about 1 part to 300 parts of water. Where stronger solutions are required for washes, gargles, or to moisten dressings, 1 part of the acid and 3 parts of phosphate of sodium to 50 parts of water have been used. When applied to wounds it appears immediately in the urine.

Its alleged advantages over all other antiseptics are: First, that it is far more powerful and effective in smaller quantities; and secondly, that it is, in all quantities necessary for ccmplete effectiveness, entirely devoid of irritant action upon the living tissues, It is not caustic nor corrosive in any quantity, and never produces inflammation. In large quantities it may be irritant and painful, but rarely surpasses a stimulant effect, while it appears to be quite neutral in the very small quantities which are yet thoroughly effective; thirdly, it is said to reach and prevent processes

of decomposition which are beyond the reach of all other antiseptics or antiferments. These processes are of two kinds, namely,—vital, or those in which living organisms have an important part, such as that produced by yeast and many of those which occur in putrefaction; and chemical, or those which occur independent of vitality, as the production of the volatile oils in mustard and bitter almonds, the effect of diastase &c. Now, while carbolic acid and other anti-ferments are azymotic, or completely arrest or prevent fermentations of the first kind, they are powerless with the chemical processes. Salicylic acid is said to be more effective with the vital ferments, and equally effective with the chemical.

Fourthly, in quantities said to be thoroughly effective, it is entirely odourless and tasteless, and harmless, whilst it has no poisonous effect in any reasonable quantity.

It prevents or arrests the souring of worts, washes, and beers of the brewers, and prevents or arrests the putrefactive agencies which are so troublesome and destructive to the glue manufacturers; and these and similar trades have thus far seemed to be its principal consumers. Separate portions of fresh milk set aside to become sour, one to which 0·004 per cent. of salicylic acid was added, soured thirty-six hours later than the other. Urine thus protected was on the third day still clear, and free from ammoniacal odour.

Varying proportions of the acid added to accurately measured separate portions of sweet milk, and these carefully observed afterward until they sour—or, by the use of meat juice instead of milk, observed closely for signs of putrefaction—would offer good indications of the quantities required to arrest these varieties of fermentation.

Professor Thiersch, of Leipsic, used it upon contused and incised wounds, and in operations, with excellent general results, destroying the fetid odour of cancerous surfaces and pyæmic ulcerations. To such uses this writer would add the suggestion that for washing out the cavities of the

abdomen and chest after those operations which tend so strongly to septicæmia, solutions of salicylic acid would seem to offer very great advantages should it prove to be as bland and unirritating as it is stated to be, and yet so effective.

Most of these statements are summed up from the periodical literature of continental Europe during the past six months, little having appeared upon the subject in Great Britain, or in this country, and nothing having been done with it so far as known in either county.

In occasional paragraphs and allusions benzoic acid has been coupled with salicylic acid as being only second to it in effectiveness as an anti-ferment, and with similar advantages

These statements are collated and condensed here as being well worth attention in themselves, and in their relations to the phenomena of septic poisoning as already known. But they have a new significance, or at least suggest to this writer a new train of thought when viewed in connection with some researches now in progress and but just appearing in the periodical literature.

Experiments were made upon animals by the injection of measured quantities of septic blood. The blood of a healthy animal was allowed to become putrid. Increasing doses of this were injected into healthy animals until the amount necessary to cause death was ascertained. This quantity proved to be large, the animals recovering from all the small doses. Blood from the animal whose death was caused by injections of putrid blood was injected in increasing doses into healthy animals until the fatal dose was reached, and this dose was found to be smaller than that which killed the first animal. The blood of the second dead animal was used on healthy subjects in the same way as that of the first, and proved fatal in still smaller quantity. The experiments were continued upon the same plan until finally a point was reached when a very minute portion—the fraction of a drop perhaps—from the last animal proved fatal to the next, with more violent toxic symptoms

and a shorter course. The important indications of this series of experiments is of course the rapid accumulation of potency in septic poisoning. And the question put by this indication is not only as to how this potency accumulates, but also how to prevent and arrest it. Metroperitonitis and common pyæmia would, doubtless, unobstructed, accumulate potency in the same way without visible inoculation, and often do continue and acumulate even against the vigorous application of the best means of prevention yet known. No hypothesis can be constructed that will embrace the phenomena of septic poisoning, as they are now rapidly being investigated without including zymotic diseases and the cachexiæ, and none will account for the phenomena already observed without bringing it within the sphere of what is called, in some of its degrees or phases, fermentation. Hence, if the medical art is to keep pace with the progress of the physical sciences, physicians cannot afford to pass by such articles as salicylic and benzoic acids when offered by chemistry, without investigating their effects upon disease, even though not one out of ten should repay the labour of investigation, for it is certainly in this direction of researeh that medicine must look with greatest hope of success to control those abnormal vital processes which so far may be modified, but not stopped. For example; Suppose a primary syphilitic or cancerous sore, or a diphtheritic patch, or even a cachectic pulmonary infection, while these are merely the localised phenomena of an external inoculation, or of an internal taint,—they must all be considered to partake of the nature of a fermentation, and by some such process invade the whole organism. Then sup- an anti-ferment, which when applied to any surface not covered by an impervious cuticle very soon appears unchanged, first in the blood, and then, in the secretions and secretions,—the manifest logcial antagonism of such substance to the diseased conditions becomes too important to be neglected, and the counsels of wisdom demand that its claims to such antagonism be disproved before it be dis-

missed. The question as to what may become of the cancer-cell, or of the less tangible precedent cause of it, or of the bacteria, or the precedent conditions which increase their fertility, under the well-directed influence of this class of agents, is, perhaps, the most important one in all medical science. And just in proportion as accurate research develops agents of greater and greater power, will be the prospect of better succes in treatment.

The phenols, especially the so-called carbolic and cresylic acids (phenol and cresol), were, and must always remain to be, most important additions to this class of agents, surpassing in power all that had been previously tried. And if now salicylic acid shall prove more potent than the phenols the further gain will be very great, and the researches upon it will again lead up toward future discoveries of still greater power.—*Chemical News.*

On a Case of Nearly Complete Deafness of One Ear, after an Apoplectic Seizure. By J. HUGHLINGS-JACKSON, M.D., F.R.C.P., Physician to the London Hospital, and the Hospital for the Epileptic and Paralysed.

That different kinds of ear disease occur with different kinds of nervous symptoms in different kinds of relation is well known. I have never known, however, complete deafness after apoplexy of any kind. I here use the word apoplexy in its wide sense, as including sudden coma from many causes. It is believed that disease of the labyrinth will cause grave nervous symptoms mostly vertigo with retching and vomiting. The labyrinthine disease, it is supposed, may be either primary—a hæmorrhage in it, for example—or secondary, there being increased pressure in the labyrinth, consequent on disease in the tympanum. I think, considering that there is what Knapp calls limitation of the field of audition, in the case which I am about to relate there is disease of, at any rate, the cochlea, and probably there has been a sudden hæmorrhage. It is not cer-

tain, however, that a hæmorrhage in the labyrinth, however sudden and extensive, would produce such deep apoplexy as this patient had; his coma was like that from a large cerebral hæmorrhage. I think there may have been a separate lesion to produce the apoplexy. I suggest the possibility of another lesion because I do not think that any disease of the encephalon, which might account for the apoplexy, would produce deafness. I except, of course, disease of the auditory nerve or its nucleus; but of disease of this nucleus I know nothing. It may be theoretically maintained that a hæmorrhage in the medulla would produce the two symptoms—deafness and apoplexy. But diagnoses without the anticipation of post-mortem examinations are not very profitable in case like this. My patient was well in general health when I saw him last, and I hope he is so still. His case is of sufficient clinical rarity to deserve record.

At 9 p.m. on Christmas-day, 1871, I saw with Dr. Fredrick Marsh, a man, forty-eight years of age, who was suffering from apoplexy. He was profoundly unconscious. I could find no local paralysis. I regret that I did not take any notes of the case. I never expected to hear of him again. We both of us beleived the man was dying. It *was* a case of apoplexy; there was deep coma, and the question in my mind was whether the case was one of simple apoplexy or of large clot in the pons Varolii. Having seen a good many cases of apoplexy, I was able to come to the conclusion that I did not know, or, as I may be permitted to put it, that there was no evidence to warrant a diagnosis. I mention these things to show that, at any rate, the case was severe, and one likely to prove fatal. To my astonishment I heard, some weeks later, that the man was well again, except that he was deaf. As this was a rare sequel of apoplexy of any sort, I asked Dr. Marsh to send the patient to me. From the patient's wife, and from the examination of the patient I took the following notes on March 7:—

On Christmas-eve, about 10.30 p.m., he blew his nose

very violently, and afterwards said he had pains from the back of his head down the spine to the calves. He then turned "on his stomach and on his hands and knees" with pain, seemed to faint, and then became unconscious. As I say, when I saw, him about twenty-four hours later, all I could determine was that the patient was apoplectic and, as I thought, dying. His wife told me that he came fully to himself in about fourteen days, but as he spoke in four days and seemed to know his wife, he was probably only partly unconscious the latter part of the fortnight. When he got out of bed at the end of the fourteen days he tottered, but only slightly. But he was deaf; at first he thought it was his wife who could not speak.

When I saw him his general health was good. There was no albumen in his urine. There was no paralysis and he did not reel. His optic nerves were normal. The only alteration made in him during the apoplexy was the deafness of the left ear.

He had for twenty or thirty years been considered deaf of the right ear, but *now* the right ear is the only useful one; he calls it his good ear, but he can, with it only hear when his wife puts her mouth close to it. The state of hearing on the "bad" side may be inferred from this state of the "good" ear.

He could not hear the tuning-fork placed on his forehead in either ear; when placed on the left mastoid process he heard it faintly. Moreover, he spontaneously remarked that it was the note C; this was engraved on the fork. He himself found out this and mentioned to me that he could hear the tapping together of two wooden stethoscopes better with his worse (left) ear, and that "it was very remarkeable" that he could hear the nipping together of his nails on the left side, and not on the right. A medical friend helped me in my examination, and reported that both membrana tympani were concave, but the right the more; the Eustachian tubes were open.—*The Medical Times and Gazette.*

CANADA

Medical and Surgical Journal.

MONTREAL, SEPTEMBER, 1875.

THE CITY BY-LAW TO ESTABLISH A BOARD OF HEALTH.

We have before us a copy of the by-law of the Corporation of our city "for the establishment of a Board of Health "in the city of Montreal, to enforce an efficient system "of vaccination, and to provide sanitary regulations for the "said city." This is the objectionable document which gave rise to the uproar and breach of the peace which recently occurred. While not in any way giving countenance to extreme measures, we must say that from the tenor of some of the provisions of this by-law we are not at all surprised that it had such a remarkable effect on the people who gave way to riot and disturbance. For instance, in clause 17 we read: "The Board of health shall have power to take effec- "tual measures to prevent the entrance of any contagious "or infectious disease into the city, *to cause any person in "the city infected with such disease to be sent to the contagious "disease hospital, or such other place as the said board may "determine upon.*" This particular clause (the italics are ours) if the by-law had been passed would have occasioned endless trouble, and would in many instances have been resisted. It is hard enough to suffer from disease which is preventible, but to have superadded the infliction of removal to a pest house without one's consent is to say the least highly objectionable and would be justly resisted. We are perfectly in accord with those who believe in isolation, but the measures for attaining that isolation should not be extreme or else they will not work.

Again, at clause 25 we read. "Immediately on a case of "small-pox or typhoid fever, or any contagious or infectious "disease being reported to the board of health one of the "medical officers shall visit it, and ascertain whether in his "judgment removal to hospital or such other place as the "said board may determine upon is necessary, and if such "removal be decided upon, the patient shall be immediately "conveyed to such hospital or other place in the ambulance "provided by the health department for that purpose." Let us take this home to ourselves and ask the question whether with Spartan stoicism we would peacefully stand by and permit the removal from our own nurturing care, of a wife or child and that at the dictum of an officer of health, a person whom we do not know, perhaps have never before seen, and in whom we have not the slightest confidence—but then as if to add insult to injury the sick person is placed in a filthy vehicle styled the city ambulance to be conveyed to a hospital which is yet a subject of contemplatiom and not of fact. Before any such by-law is enacted, the city must provide a suitable establishment, with all the appliances necessary and not a make shift such as exists in the Hall House in the mountain park. We have heard much of a fifty thousand dollar grant for the purpose of erecting a small-pox hospital, but so far there has been nothing but talk on the subjeet. The city council must give the citizens an earnest proof of its honesty in this matter, otherwise it will not be seconded in this attempt at sanitary reform. We do not suppose that the measures before us would have passed without very considerable modifications. And it is to be regretted that it was brought up at all, unless at a full meeting of council, to be then coolly and dispassionately discussed, and all objectionable clauses struck out. It is greatly to be lamented that so much fuss has been made over the disturbance which occurred at the City Hall on a late occasion when this city by-law was introduced. The rioters were composed chiefly of persons without any stake in the city, many of whom went there we doubt not with

purposes of plunder. We believe that they would have been dispersed by a corporal's guard of resolute men and the honor and dignity of the city preserved. With regard to compulsory vaccination we think it is a matter for the Dominion Government to legislate upon and not the municipality of any one city or town. It is a subject of vital importance to the inhabitants of this growing country, and should engage the earnest and careful consideration of the highest legislative tribunal amongst us. Compulsary vaccination has in other countries almost stamped out the disease small-pox. We cannot conceive why our French Canadian fellow colonists are so averse to vaccination. Let any unprejudiced person stand at the door of any one of their churches, when the vast congregation is dispersing to their homes after service, and he will observe that every second face presented, exhibits the marks more or less of small-pox. Let him now turn to a catholic church of Irish or old country worshipers, and it will be exceptional to observe a single seared or pock pitten countenance. We will not seek to ascertain the cause of this difference, it is not a question of race or of religion, but of education. The French Canadian does not fear small-pox, heroically he will expose himself and those dear to him to the chance of contracting that disease, the possibility of preventing its spread through his family, does not appear to enter into his calculations, and should death remove a victim or two he with the Turk exclaims that God is great and the event was inevitable. This state of things proceeds from an imperfect knowledge of facts. Our French Canadian is proud of his origin and continually speaks of *La Belle France* as though no other country on the face of this globe existed where almost perfection was to be met with. We honor him for this love of the country of his forefathers, and as a British Canadian we confes to a like feeling as regards Merry England, but if he would put in practiae with the same earnestness the sanitary measures adopted by France in this question of vaccination, the coming race of French Canadians would be as free from the ravages of small-pox as are the people of old France.

THE CANADIAN MEDICAL ASSOCIATION.

In another column will be found Dr. Botsford's address at the opening of the eighth annual session of the above-named Association which for this year met in the city of Halifax, N.S. In the course of that address the worthy President drew attention to the subject of Registration of of Births, Marriages and Deaths, stating that in some of the Provinces of the Dominion the custom of registering these events does not exist. We question if there does exist in any of the Provinces a system of registration which can be regarded as reliable.

In Ontario, we believe, that some two or more years since, a registration act was introduced into the local house and became law, but the mischief of the thing is in leaving these matters to the local legislatures of each Province to act upon. The Province of Ontario finding that vital statistics were not attainable in the absence of a registration act, and recognizing the many difficulties of obtaining such an act from the General Government, decided on introducing and pressing such an act through the local house. Ontario has set us an example of progress for which she deserves a full meed of praise, and we trust that this action of our sister Province will be followed by the other Provinces.

In this Province we are badly off if this matter is left to the local authorities, as the powerful influence of the Roman Catholic Church will be brought to bear to crush out any contemplated move in the right direction. We were highly gratified to observe the reference made to this important subject by the President in his address, and still more so to notice that at his suggestion a committee of associates was named for the purpose of memoralizing the general government on the subject of a comprehensive act of registration of births, marriages and deaths for the whole Dominion, and he expresses a hope that this movement on the part of the Canadian Medical Association will hasten that most to be desired action of the Dominion Legislature."

ROYAL COLLEGE OF SURGEONS, ENGLAND.

We record with pleasure that R. F. Godfrey, M.D., Bishop's College, Montreal, and R. A. Stevenson, M.D., McGill University, passed the necessary examinations for the diploma, and were admitted members of the Royal College of Surgeons of England on the 22nd of July last. Dr. Godfrey is the eldest son of our esteemed fellow citizen Robert Godfrey, M.D., Professor of Hygiene, McGill University, who is at present travelling in Europe with his family.

A REMARKABLE CASE OF WORMS.

(From the White Cloud Chief.)

An old man named Christel Poff, of German descent, living in Missouri, in the locality known as "Cracker's Neck," has been for years afflicted with a disease, which took the form of inordinate thirst, that water would not allay. He grew worse from year to year, until finally he became partially insane, and imagined that all manner of reptiles were after him. About this time a celebrated physician of the Uroscopian school happened in the neighbourhood, and was called in to examine the case. Having applied the tests used in his practice, he pronounced it a chronic case of worms, and immediately set to work to compound a remedy from well known vegetable medicines. The mixture was composed of equal parts of castor oil wormwood, tansy, rue and assafœtida. After administering repeated doses of this compound, he finally succeeded in starting the patient to vomiting, when the whole cause of his disorder came to light. He threw up ten fish worms, three lamprey eels, seven crawfish, one mud turtle, five lizards, two tree frogs, one bull snake, a section of a snake fence. and the worm of a copper still containing sixteen coils. He at once complained of being better, and has steadily improved ever since.

He has no idea how or when these things got into his stomach, but remembers having taken a drink of water when a boy, which act was performed by lying on his stomach.

CANADA

MEDICAL & SURGICAL JOURNAL.

ORIGINAL COMMUNICATIONS.

On the Pathology of Miner's Lung. By Wm. Osler M.D., Prof. Institutes of Medicine, McGill College.

(Read before the Medico-Chirurgical Society)

Situated as we are, at a considerable distance from mining centres, it is only occasionally that cases of disease resulting from the inhalation of coal dust are brought before our notice. Having lately had such a case, I take this opportunity of laying it before you, together with a hitherto undescribed specimen from the Museum of the College, and also, other specimens illustrating the pathology of lung pigmentation. The man from whom I obtained the lungs of the first case I am about to describe was a powerful, well built Scotchman, 36 years of age, who died under my care in the small-pox department of the General Hospital of Variola maligna, after an illness of five days. Throughout the attack there were no symptoms referable to disease of the lungs ; the breathing, it is true, was greatly accelerated, but not more than is usual in cases of hæmorrhagi small-pox.

Post-mortem examination, four hours after death—On opening the thorax the lungs appeared very full in volume, and instead of collapsing, projected slightly forward. The lower lobe of the right lung was adherent to the pleura in front and laterally by thin, delicate bands, apparently not of old date. Left lung and upper part of right free. No fluid in the pleural cavities. On removal from the chest both lungs presented over their whole surface a uniform, deep blue-black colour ; so general was it, that not a trace of the

natural hue of the organ remained. At the apices and in front the colouration was not as intense as in the posterior regions, but here it was exaggerated by the hypostatic congestion existing in these parts. Both lungs were crepitant throughout and floated in water. Cicatrices existed at the apices. Several patches of collapse were noticed along the anterior free margins. Pulmonary pleura somewhat opaque, and thickened to such a degree that even with a lens the air cells could not be seen through it, except at one border where they were much dilated and emphysematous. At spots, probably corresponding to the interlobular septa, the colour was darker than at others. On section the organs presented an intensely black colour, and the serum which flowed from the cut surface was of an inky hue. The posterior lobes were sodden and œdematous, but still crepitant, and floated in water. Here and there throughout the substance small patches of apoplexy—the largest the size of a walnut—could be seen. When squeezed a fluid like ink could be expressed, which left a dark stain upon the hands. Repeated washing of a portion of lung diminished considerably the intensity of the colouration. On the surface of a portion thus treated different shades of pigmentation can be seen. Round or linear patches, ranging in size from a pea to a hazel-nut, of an intensely black colour exist in large dark, slate grey areas. In many of these spots the air cells can still be detected, in others they appear to be obliterated, and the section in this case is uniform, not porous. On careful dissection I was able to demonstrate in nearly every instance that these spots had a small bronchiole penetrating them, and this can be seen in several of the specimens. These patches when excised and placed in water always sank, even when air cells could be seen in them. Many such existed just beneath the pleura and their situation was easily told, not only by the deeper colour at these localities, but, also, by the fact that a slight superficial puckering sometimes existed. To the feel they were also firmer, more solid, than the other parts of the lungs, not so much so,

however, as the apoplectic spots. The portions of lung tissue intervening between these intensely pigmented areas were of a uniform slate grey colour, studded with the hæmorrhages already mentioned. The fluid expressed from these pieces was very dark. The air-cells when examined with a lens appeared almost universally emphysematous, more especially those in the upper and anterior regions of the lungs, occupying a superficial position. Certain limited sections of the lungs, generally situated superficially, appear denser than others, the air cells are visible but very small, and the amount of alveolar tissue in proportion to the air space is abnormally great. This may be due, of course, either to collapse or to an increase of the fibrous elements in the walls of the air cells. I am inclined to think it due to the latter from examination of the air cells, and also after comparison of it with several genuine patches of collapse, which existed at the anterior free borders. Several small cavities, the largest about the size of a pea, containing air were met with, probably large emphysematous cells, as they were quite devoid of any definite wall, and the air vesicles opened directly into them. The tissues of the larger bronchi preserved their natural colouration, but as they reached their ultimate ramifications, when diminished to the size of a crow-quill, the mucous membrane became of a deep black colour, and the surrounding elements of the walls were very generally pigmented. The bronchi were filled with a frothy mucus, but the mucous membrane was not thickened, nor were there any evidences of chronic bronchitis. The *tunica adventitia* of the blood vessels—large and small—was impregnated with the dark particles and the transverse section of an artery presented three zones of colouration, a dark one corresponding to the *adventitia*, a white fibrous one to the *media*, while the red central zone occupying the lumen of the vessel is made up of the blood corpuscles. The bronchial glands were firm, not enlarged, and presented an excessively black surface on section.

Microscopical examination: first, of the dark coloured

serum, which can be so readily expressed. A variety of cellular elements are here met with, and the colour is seen to depend upon black granules, partly free, and partly inclosed within the cells. A difference would seem to exist in this respect as to whether the drop examined was furnished by one of the darker spots, or from the intervening greyish portions; in the former case there are more free granules, in the latter they are generally inclosed within corpuscles. These carbonaceous particles range in size from almost imperceptible molecules up to portions the 1-12000 of an inch and over. The latter are, as a rule, angular and do not exhibit the Brownian movement. In addition, pieces are occasionally met with of an elongated form, and of a brownish red colour at the edges, or, if thin enough, over the whole mass. Some of these can be seen with the naked eye, and I measured several more than 1-250 of an inch in length (See fig. 1). Other very peculiar forms were noticed, which, from the regularity of their outlines, I believe to be structures connected in some way with the coal, but upon this point I lack the necessary knowledge to decide. The cellular elements found in the expressed serum may be arranged as follows:—

Fig. 1. x 100.

I. Groups of flat cells each with a distinct nucleus, the boundaries of the cells, in many instances, being ill-defined, or sometimes similar cells are grouped together upon a portion of membrane. Free in the field are others identical with the individual ones composing the above groups. They are about the 1-1200 of an inch in diameter, nucleus large and sharply marked, borders often indistinct, cell substance granular, friable, often broken away in part, leaving the nucleus exposed. The free nuclei of these cells also are present in numbers. Carbon granules are only occasionally met with in these corpuscles, and I think they must be regarded as the original cell elements of the alveoli, and perhaps, to a large extent deriviatives of them in a slight catarrhal process.

II. White blood corpuscles, distinguished from the former by their smaller size and less distinct nucleus. They only occasionally contain dark granules.

III. Corpuscles in which the bulk of the carbon is contained, and upon whose presence the black colour of the expressed juice in most instances depends. These are very variable in size, and may, on the one hand, approach the colourless blood corpuscles, and on the other, attain to five or six times their diameter. See figure 2 (*a*).

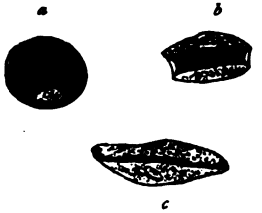


Fig. 2.

In shape they are usually round, sometimes oval, occasionally irregular, very rarely approaching the spindle form. Inside all of these the carbon particles exist in extraordinary numbers, filling the cells in different degrees. Some are so densely crowded that not a trace of cell substance can be detected, more commonly a rim of protoplasm remains free, or at a spot near the circumference, the nucleus, which in these cells is almost always eccentric, is seen uncovered. The contained carbon particles are, for the most part, angular, and when not too thickly massed together, a reddish brown colour can be observed in each. In a few of them comparatively coarse portions of coal are found imbedded, stretching the cells to their utmost limits. At fig. 2 (*b* and *c*) such cells are represented, and in the latter the corpuscle has evidently accommodated itself to the shape of the piece of coal. One most curious specimen was observed: on an elongated piece of carbon three cells were attached, one at either end, and a third in the middle; so that the whole had a striking resemblance to a dumb-bell. I could hardly credit this at first, until, by touching

the top-cover with a needle and causing the whole to roll over, I quite satisfied myself that the ends of the rod were completely imbedded in the corpuscles, and the middle portion entirely surrounded by another. So strong was the attachment that I failed to separate any of the corpuscles by pressure on the top-cover and other manipulations. Another corpuscle was seen entirely surrounding the end of a small rod, forming a miniature drum-stick, the handle of which was twice as long as the diameter of the corpuscle.

IV. Decolourized red blood corpuscles, which are very numerous in all the specimens examined. Many of them are aggregated together into masses, casts, probably, of the air cells pressed out of the apoplectic centres.

V. Amyloid corpuscles, of which a few well-marked specimens were observed.

We come now to the examination of the lung substance itself, and first of the small dark areas. On teasing portions of these, unless done very finely no structure can be made out, uniformly dark masses present themselves. If, however, the elements are more minutely separated a dense interpenetration by small dark granules of all the textures is observed. We have not here to deal with cellular bodies containing the pigment, for it is free in the interstices of the tissue, and few or no cells can be detected. So thickly is the pigment scattered over the structures, that even an isolated fibril of elastic tissue is with difficulty seen, on account of the granules attached to it. The air cells seem obliterated by the excessive accumulation of pigment and the great increase of the connective tissue, and hardly a trace of them is met with. As before mentioned, the fluid expressed from these parts contains only fine granules with an occasional cell. Thin sections show very well how intense the pigmentation is, but yield very little information as to its distribution, for a uniform black surface is presented, which only here and there in irregular spaces is penetrated by the light. To-

wards the borders, where the tissues are not so densely infiltrated, some of the carbon is seen to be contained within round corpuscles, and also confined in very irregular, somewhat spindle-shaped areas, but whether these latter are connective tissue corpuscles or not is difficult to decide. From their extreme irregularity and the number of their processes it is probable they are not, but only represent the arrangement of the carbon granules among the elements of the tissue. All the coats of both bronchioles and vessels in these areas are impregnated in the same way, but I have not found any of the latter obstructed by accumulations of coal dust.

In passing to the consideration of the histology of the less pigmented and by far the largest section of the lungs, it may be mentioned that a considerable part of the colouration in this is due to carbon granules retained within the cells already described. These exist in abundance throughout the whole substance, and are everywhere present, both in sections and in teased preparations. They are found chiefly in the interstices of the stroma and along the course of the alveolar septa, occasionally, also, lying free in the air cells. Nothing further need be added to the description previously given of them.

Fig. 3. (x 450.)

Secondly, isolated particles of carbon are tolerably numerous, even in situations which, under the microscope, look on superficial examination to be quite free. The membranous walls of the alveoli are constantly seen dotted over with black granules, though it is rare to see any occupying the cells upon it, and in the same way the interstices of the fibrous stroma contain them in abundance. The

manner in which these small particles gain entrance into the stroma may sometimes be observed, as sketched in figure 3, representing the margin of an air cell. Particles of various sizes are there seen, some attached to the free margin, others imbedded in its substance, while others again occupy positions a considerable distance in. A third situation is the point of junction of the fibrous septa, where, in many instances, quite a dense accumulation is met with in the form of fine granules, as is seen at fig. 4.

Fig. 4. (x 100.)

A fourth and most favourite locality is the interlobular connective tissue, which cannot be considered apart from that of the vessels and bronchi. Here, as can be seen with the naked eye, the deposit is excessive, and the blood vessels are readily followed as dark, irregular branching lines. The examination of sections of vessels show that in most instances the *adventitia* alone is effected, while the *media* and *intima* remain quite normal. Similarly it is only the loose fibrous coat of the bronchi in which the pigment occurs, though occasionally a transverse section of a bronchiole is seen pigmented throughout.

With regard to the alveoli themselves no very great deviation from the normal structure was noticed, save that in many places an increase in cellular elements, the result of a catarrhal process, had taken place on the membranous wall. In some situations, also, a marked thickening of the

alveolar septa had occurred, which was perceptible to the naked eye and has been already referred to in the description of certain areas in which the air cells were much diminished in volume. This was rendered very evident by comparing specimens taken from these areas with others from a healthy lung, or even from more natural sections of the same one. In one or two localities isolated air cells, or small groups, were found filled with colourless tenacious plugs (very similar to those of croupous Pneumonia), consisting of an extremely delicate fibrillar network enclosing various cellular structures, among which those described under (1) and (3) of the elements found in the expressed serum of the lung were the most numerous. The large ones, filled with carbon granules, in some instances gave a dark tint to these small masses.

The most superficial layer of the pleura, composed of a fibrillar membrane upon which the pavement epithelium lies, can be stripped off as a clear transparent structure quite devoid of pigment. Immediately beneath this, however, there is a fibrous layer densely crowded with carbon granules, both free in the tissues and contained in the large round cells, which latter are very abundant in this situation. Oddly enough, just in teased portions from this sub-pleural region some of the coarsest particles of carbon were obtained.

I have been fortunate enough to procure for examination several other specimens illustrating different degrees of pigmentation in the lungs. The first of these, comprising the lower lobe of one lung, was obtained from a Cornish miner who died under Dr. Howard's care some years ago in the General Hospital of Pneumonia. The notes of the case have unfortunately been mislaid so that I am unable to state the condition of the other parts of the organ. Superficially, the whole lobe is of an intense blue black colour, due to the accumulation of the carbon beneath the pleura, and this deposition varies in thickness in different parts, in some forming a very thin layer, while in others it has a

diameter of from two to four lines. At one or two places it is absent, one spot especially, near the root, and through these the light coloured portions of the lung can be seen. On section, irregular spots of an exceedingly black colour are seen scattered over a very pale lung substance. The relation between these two areas of colouration is not the same throughout; towards the root and in the portion of the lobe which rests on the diaphragm the dark exceed the light, while in the posterior and lateral regions the reverse holds good. Closer examination shows that the favourite localities for the pigment are about the vessels and bronchi, and the interlobular connective tissue, which can be seen as dark bands stretching from the pleura into the substance. Very many of the dark areas are firm and indurated, presenting a smooth hard surface on section, with occasionally the remains of a bronchus or vessel in the centre; while others of the same pitchy hue are made up of emphysematous air cells with thick hard walls. The portions of the lobe free from pigment look healthy, the air cells are however emphysematous at the margins and beneath the pleura. Many bronchi and vessels are wholly devoid of any pigmentation at their circumference, others of the former have somewhat thickened walls and from several tenacious plugs were extracted.

The bronchial glands, three in number, attached to the root, are firm and of an intensely dark colour.

In the microscopical examination it was found exceedingly difficult to tease up pieces from the dark indurated areas, on account of their extreme hardness and brittleness. They are composed entirely of fibrous and elastic elements, in the interstices of which the carbon granules are so densely arranged that it is only from the margins, where the fibrils project, that any idea of the structure can be obtained. Sometimes, near the borders, or in a less dense portion, a trace of an air cell is found, but as a rule, all remains of them are obliterated by the overgrowth of the fibrous tissue. Very few cellular elements are found in these localities,

and those present are small and do not contain many carbon granules. On the other hand, in and about many of the less indurated areas, the cellular elements are present in abundance, though not so large and more angular in shape than in the former case. This may be accounted for, however, by the fact that this specimen has been in spirit for over ten years, while the other was put while fresh into 1 per cent. solution of potassium bichromate. Cells, large and small, containing coarse particles of carbon or even distinct fragments are numerous. In some instances a process of atrophy, or shrivelling, appears to have gone on in these cells, for elongated portions of carbon were seen enclosed in a contracted mass which bore some resemblance to the remains of a cell ; or again, others were imbedded in a yellowish coloured substance with irregular hard outlines as though a deposition of inorganic matter had taken place about them. Free in the field were many small angular black particles, also others much more minute. In this case coarse particles of silex were quite as common as those of carbon, and in one place an aggregation of 15–20 attached to a piece of lung tissue was noticed. None of these were observed within cells. The dark emphysematous localities, which usually have a small bronchus in immediate connection with them, are composed of a variable number of dilated air cells, all of a jet black colour, and with hard fibrous walls. I dissected out a small spot about the size of a cherry stone containing five emphysematous air cells and teased it up very finely, but was unable to find anything like an alveolar membrane, only fibrous tissue everywhere covered by dark granules. In other regions where the pigmentation was less profuse, a definite increase in the fibrous elements in the walls of the air cells can be seen. Instead of the isolated fibres of elastic tissue which in the healthy lung run across the alveolar wall and serve to strengthen it, we have here in many instances a perfect network. Nor are these to be mistaken with their sharp hard outlines for the collapsed capillary vessels, of which traces in the form

of irregular lines can be seen in normal alveoli. The infiltration of the pleura in this case, also, is limited to the deeper layers, the uppermost—basement membrane and epithelium—remaining free. The bronchial glands are unusually hard and fibrous, and microscopical examination shows an enormous overgrowth of the connective tissue with a corresponding diminution in the cellular elements. The few which are present contain numerous carbon granules.

The third and fourth cases do not properly come under the heading "Miner's lung," but they serve to illustrate several points in connection with the subject, and aid, also, in the understanding of the general pathology of lung pigmentation. The third specimen was obtained, like the second, from the Museum of the College, and of it I have unfortunately a still scantier history. All my information is confined to the brief record on the label, "Melanosis." It is a piece about the size of the fist, representing, I take it, a portion near the apex, and is of a bluish black colour externally. The pleura covering it is thickened, in places white and fibrous, at others intensely dark and fully one-fourth of an inch in thickness. The colouration is very uniform, but on section is seen to be chiefly superficial, extending, however, into the interior in the form of bands, between which the lung tissue retains its natural hue. To the touch the whole mass is firm and indurated. The bronchi are thickened and in some cases surrounded by circles of pigment. Several small caseous masses encapsulated in fibrous tissue, deeply pigmented, occur at the apex. The microscopical examination shows that the pigment is chiefly interspersed as small granules among the fibrous elements of the thickened pleura, and in the bands that pass from it into the lung substance. In the former situation sections demonstrate that the pigment is distributed linearly, often in alternate layers, or interspersed between fasciculi of connective tissue. There is a mar
absence of the small angular particles of c
few pigmented corpuscles were met

The fourth specimen is from a man, 65 years of age, who died of Bright's disease in the General Hospital under Dr. Ross, to whom I am indebted for the portions of lung. As far as could be ascertained this man had never been employed in mines, nor in situations where he would have been exposed to a sooty atmosphere. An interesting point in connection with this case is that the pigmentation of the skin was deranged; he presented several large patches of Leucosis.

In the portions of lung given to me for examination, the pleura certainly is abnormally pigmented for a man of his age. In parts the dark colour is almost uniform, but the general arrangement is in round, often irregular shaped spots, which are tolerably closely set over the surface and do not correspond to the interlobular septa. On section they are seen to be quite superficial, in most instances confined to the pleura, though sometimes dipping into the lung substance in the form of bands, or else involving the air cells immediately beneath, in which case, these are invariably emphysematous. The lung substance itself is but little affected, only here and there presenting a dark appearance, due to the accumulation of pigment about the vessels and in the interlobular connective tissue. The dark subpleural areas contain a tolerable number of the large cellular elements, but most of the pigment is free among the fibrous tissue. Where the pigmentation extends into the subjacent air cells the septa are dark in colour, and occasionally the alveolar wall was seen to have irregular patches of pigment upon it. Cells containing carbon are also very common in the alveoli, which have been involved in a pneumonic process, and are filled with cellular elements. Sections made parallel to the pleura in these situations show very well how the alveolar septa are covered with pigment, partly free and partly intra-cellular; while the air vesicles are filled with a fine granular substance and cells, many of which contain carbon and are identical with those in the alveolar septa. Small angular particles of carbon are com-

mon in the field, but no coarse ones, like those in cases 1 and 2, were met with. An interesting fact, which will be referred to hereafter with reference to the probable origin of the pigment in this case, is that extravasations of blood were seen in the sub-pleural region, and usually in the vicinity of the dark areas. On several occasions I saw at the edges of small teased portions of an intensely black colour the reddish brown remains of an extravasation. The small pigmented areas in the lungs presented nothing remarkable, they were chiefly in connection with blood vessels.

From the description of the two first cases it is evident that we have here to deal with the early stage of the disease known as Miner's Lung, or, to give it the scientific appellation, Anthracosis. I say the early stage, meaning that the degenerative process can hardly be said to have commenced, and had not these men died of intercurrent affections, they might have lived for years under favorable hygienic conditions. No doubt, however, the point had been reached where further exposure to the impure air of the mines could only have resulted in bringing about serious lung trouble. Ultimately, as the records of *post mortems* show, there arise extensive areas of consolidation—carbonaceous Pneumonia, as it is called,—with numerous cavities containing an inky coloured fluid, and at last death takes place with many of the symptoms of chronic Phthisis, a peculiarity in some cases being the expectoration of a dark colored mucus. In the cases under consideration the intensely black consolidated spots may be regarded as the first step in a series of degenerative changes. Such general infiltration of the tissues by a foreign matter cannot be without a strongly irritating action, the final effect of which would be a proliferation of the epithelial and connective tissue elements, with the result of obliterating the air cells and the formation of firm indurated areas. The larger these become, the more the cellular elements participate in the process, so much the more likely will they be to soften at the centres, and finally form cavities. The indurated spots

in our specimens were remarkable by the absence of corpuscular elements, and the same would probably hold good in larger areas ; still, even in these, as occurs in Cirrhosis of the lungs, a molecular degeneration goes on in the centre, with the formàtion of a cavity. In the lungs of all individuals who die of this disease these cavities, which are no doubt often bronchiectatic, are described, surrounded by indurated areas, while the comparatively healthy sections are intensely black and emphysematous. Several cases I find recorded of miners having died of intercurrent affections, in whom the lungs presented an appearance similar to what has been described, viz: uniformly dark in color, but with patches of variable size of a much more intense hue, the lung texture itself being healthy, or a little emphysematous. In some instances the continual inhalation of the dust in mines would appear to produce very little effect, for cases are mentioned of miners exposed for years to the same influences to which others succumb, and yet who were but slightly affected. Predisposition to lung disease is an important factor here, and it has been found that where this exists, they die at a much earlier age than those without this hereditary weakness, which need not, however, necessarily be a true tubercular diathesis. Indeed, in reading over the records of the *post mortems* in this disease, one is struck by the absence of any mention either of true tubercles or caseous masses, and in neither of the cases before us do these elements occur. It was suggested by Dr. Wilson Fox, at a discussion on this subject at the Pathological Society a few years ago, that exposure to the irritating substances in the air of the mines might directly induce the production of tubercles, and that the fibroid masses represented the final change which these had undergone. Against any such view the cases here speak strongly. There is nothing in these lungs which would be called a tubercle by a follower of Lænnec or of Virchow, and yet, if the process was one in any way connected with tuberculosis, we should expect just in this early stage to find traces of it ;

but instead, we find at the outset of the disease what is spoken of as occurring at the close, fibroid consolidation; the difference consisting in the extent to which it has gone, and in the absence in the former of secondary changes. In its essence the whole disease would appear to consist in an overgrowth—a hyperplasia—of the fibrous tissue of the lungs, induced by the chronic irritation to which they are subjected by the inspired particles of coal dust, a veritable Cirrhosis, or, as it might appropriately be called, the black Cirrhosis of miners. This certainly is the most natural view to be taken of these two cases, and accords best with their general and histological characters. From the fact that in many instances small bronchioles are seen in connection with the fibroid masses we may infer that about them the process begins, and spreads to the surrounding alveoli. In other places the *adventitia* of the blood vessels, and the interlobular connective tissue furnish starting points. We are still in the dark as to how all this takes place, how the air cells become converted into firm, hard areas—fibroid substitution as Dr. Bastian calls it, or why, again, in the same lung, some of the intensely dark spots are solid, while others are emphysematous.

Before referring to the other specimens, which do not, I believe, come in the same class, a few words must be said upon the general subject of lung pigmentation. Briefly, two sources must be admitted, an internal and an external; in the former, the pigment is transformed hæmatin, and the affection is termed *Melanosis;* in the latter it is inhaled carbon, and the resulting disease is *Anthracosis*. It is only within the last ten or fifteen years that unanimity has been reached on this point. Up to this time many of the leading German and French pathologists refused to recognize the latter source. Even Virchow as late as 1859, basing his observations on portions of miner's lung sent him from Edinburgh, came to the conclusion, though he describes angular particles of carbon from the same cases, that a transformation of the colouring matter of the blood

in repeated small hæmorrhages would account for the whole pigment. The English observers (and with them several French), one and all, as far as my reading goes, from Pearson, who in 1813 first described the affection, took a more practical and common sense view, and attributed to it solely an extraneous origin. Having many more opportunities of observing the conditions under which miners worked, and knowing the foul, sooty atmosphere of the mines, they were led to connect cause and effect, the dust with the disease, and so arrived at the truth years before the Germans, to whom, however, the credit is due of having placed the fact upon an histological and experimental basis. They demonstrated the presence of dotted cells and other structures characteristic of vegetable tissue in the coarser particles obtained from the lungs, and, also, proved that the lungs of animals might be made of a dark color by exposing them for a length of time to a sooty atmosphere. I have been fortunate, also, in these cases to obtain positive evidence of the external origin of the pigment. At fig. 5 a portion of coal is represented which

Fig. 5. (x 300.) Fig 6.

exhibits the characteristic appearance of scalariform tissue. This was a very thin flake with distinct cross bars, three of which occupied the whole breadth of the piece, while one other is less evident. The thin spots between the bars were of a brownish red colour. By manipulating I managed to break it across just below the third bar, and was then able to obtain the transverse section, which is given at

fig. 5 (*b*), and makes it more than probable that this was a portion of a scalariform duct rendered prismatic by pressure, a common structure in ferns, and also plentiful in cannel-coal. Another piece, seen at fig. 6, with two round holes, represents a portion of a dotted cell of fir wood.

To consider now this subject of Anthracosis more closely, and endeavour to obtain an insight into its rationale. A comparison of the lungs of a child with those of an adult, or, better still, of an old man, shows that the natural colouration of these organs undergoes a change as age advances, the rosy tint of childhood giving way to a marbled slate-grey, interspersed with patches or lines of an intensely dark colour. Similarly the lungs of an animal present a marked contrast to those of an adult man ; and there can be no doubt whatever that in great measure this change in colouration depends upon the inhalation by him of the products of imperfect combustion of fuel of various sorts, gas, &c. This has been called physiological Anthracosis, in contradistinction to the more extreme condition met with among those who work in mines, and other situations in which the air is charged with soot and coal dust. Against the entrance of these noxious matters into the lungs the nasal orifices are furnished with numerous hairs, which, together with the mucus of these passages, retain a considerable quantity of the dust and coarser particles met with in the air. After a lengthened sojourn in a smoky atmosphere how common it is to see the nasal secretion quite black upon the handkerchief. Still, even if the particles escape retention at the orifice, as they all do when the breathing is carried on *per orem*, a further provision is made for their expulsion when they reach the bronchial membrane, the cilia of which are in constant motion, producing currents which set externally, and slowly and surely convey the mucus with the contained particles towards the larynx, whence they are [illegible]. In ordinary inspiration the volume [illegible] probably reach further than the larger [illegible] particles in this

case, if they reach the alveoli at all do so by the force of gravity; but in the stronger respiratory efforts, just such as miners by the very nature of their work must constantly make, many attain this situation, and, as here no provision is found for their expulsion, nature provides that they shall at any rate be placed in less injurious localities. In what way this is effected, how the small angular particles which can be seen on the alveolar walls penetrate into the interior, has not yet I believe received a satisfactory explanation. Sharp, angular bodies are said to have a habit of working into soft textures, especially if there is any impelling force, however slight, behind; but what of the infinitesimal particles that we find throughout these lungs, can the same apply to them? Certain it is, however, that once fixed in the alveolar wall they resist all attempts at removal, and they may be seen, as at Fig. 2, in all stages of progress towards the interior. In their further distribution they follow exactly the course of the lymphatics, and the tissues in their immediate vicinity; where these are most abundant there the pigment is in the greatest quantity, as about the connective tissue of the vessels and bronchi, the interlobular septa, and, above all, just beneath the pleura. Once inside the lymphatic vessels a large proportion of the granules is carried on to the glands at the root of the lung, and is there permanently fixed in the cellular elements, hence the intensely dark colour of these in most persons over fifty. This fixation of the carbon granules in cellular bodies is very remarkable, and must be regarded as an effort of the economy to render harmless what might otherwise be very irritating substances. In the greater part of the lungs in the first case the pigment was contained within large cellular elements, belonging to the amœboid class of connective tissue corpuscles, and in the other cases they were by no means uncommon. These were unusually large, twice or three times the size of the colourless blood corpuscles, and very abundant, as if the supply had been equal to the demand. This pathological infiltration of corpuscles

with carbon appears to interfere just as little with the performance of their functions. as does the physiological, so common to many connective tissue corpuscles of man and the lower animals ; for in the air cells which had been involved in a pneumonic process, and among the epithelial elements with which they were filled, these same large corpuscles occurred, evidently having migrated from the surrounding tissues, in which sections demonstrate them to be plentiful. To show the remarkable aptitude of cells to take up granules of various sorts, and, also, to demonstrate the rapidity with which the lymphatic glands are affected, I performed several simple experiments, of which I shall mention two :—

Experiment I.—Into the axilla of a two days' old kitten m iii. of a strong solution of Indian ink were injected, and into the right lung of the same animal a similar quantity was injected through the pleura. The kitten was killed twenty hours after and the parts carefully examined. In the axilla there was a spot the size of a marble of a dark black colour, composed chiefly of connective tissue and fat. On examination of teased portions it was seen that the particles of Indian ink were either free in the interstices of the tissue, or else contained within the numerous leucocytes, white blood corpuscles, with which the tissue was inundated These were specially abundant along the course of the puncture, and in this situation all the leucocytes were loaded with the dark granules. The spindle shaped connective tissue corpuscles did not contain any.

On removing the sternum a dark lymphatic gland was seen, and close to it a much smaller one. Nearer the manubrium was another black spot, apparently only an aggregation of dark granules. Where the point of the syringe had penetrated the thorax the layers of the pleura were united by a dark round band about two lines in diameter. Under the dark spot on the pulmonary pleura was a portion of inflamed lung substance the size of a large pea of a dark red colour. Examination of the dark spots on the pleura

and the intervening band showed tissues everywhere infiltrated with small and large cellular elements, in which the bulk of the pigment was held. The small corpuscles in appearance and size correspond to colourless blood corpuscles, which modern pathology has demonstrated leave the vessels in large numbers in the early stage of inflammation. Among these some were sparsely, others densely, crowded with dark granules. The larger cells were more than twice the size of the ones just described, and belong to the group of connective tissue corpuscles. Many were rounded or oval in outline, and these contained the greatest number of granules, while elongated, spindle shaped ones rarely contained any. Changes in outline, amœboid movements, were seen in most of these corpuscles. In a portion of the pulmonary pleura which was under the microscope a small net work of lymphatic vessels was rendered beautifully clear by the number of dark granules inside them. Unfortunately I was unable to sketch it, as on changing the object-glass for the purpose I accidentally let it fall upon the slide and damaged it for any further use. The curious phenomenon was seen in teased portions of the inflamed lung of cells containing red blood corpuscles. A considerable number of these were met having from six to ten corpuscles in their interior, others presented only a diffuse colouration.

Experiment V.—Into the right thorax of a four weeks' old kitten m x of a solution of Indian ink were injected, and the animal killed thirty-six hours after. A dark spot on the costal pleura corresponded to the point of entrance of the needle, but the layers of the pleura were not adherent. The lower lobe of the right lung presented a dark firm mass, about the size of a walnut, occupying its interior, and scattered round it were several other small dark spots involving both pleura and lung substance. The sub-sternal glands were slightly coloured, and those at the bifurcation of the trachea were dark superficially. Examination of the dark mass in the lung showed the air cells in a condition of inflammation, and everywhere crowded with leucocytes, in-

side which almost all the Indian ink granules were contained. So numerous were these cells that even in very thin sections hardly anything could be seen. At the margins of the healthy and inflamed portions larger corpuscles occurred, which were also filled with the dark granules, and a few were noticed containing red blood corpuscles. The lymph corpuscles of the glands, sub-sternal and bronchial, especially in the superficial region, contained numerous pigment granules.

These experiments serve to show how quickly irritating materials are taken up by cellular elements; and it is in precisely the same way that the carbon granules which reach the parenchyma of the lungs are fixed in the connective tissue corpuscles and so rendered harmless. In experiments 2, 3, and 4 the substernal glands were also more affected than the bronchial, as in these cases the pigment was chiefly about the pleura, and adhesions having taken place between the layers, the lymph bearing the Indian ink granules was conveyed in the vessels of the parietal layer to the glands under the sternum.

In cases three and four the pigmentation is not so extensive, and there is not the same certainty as to its source. In the absence of any history it is hard to say whether in the former case we have to deal with a condition produced by the inhalation of dust, or whether it is an excessively pigmented piece from an old man with chronic lung affection. The general firmness of the piece, the thickened pleura, the existence of caseous masses, and the absence on microscopical examination of large particles of carbon favour the the latter view; and if so, the pigment is to a large extent melanotic, i.e., proceeds from the hæmatin of the blood. Of course in all these cases a double origin may usually be attributed, for the process of physiological Anthracosis goes on constantly, whether there be disease in the lungs or not; but we have learned to regard the pigmentations occurring in the indurated areas about cavities or caseous masses as specially of blood origin, in as much as they are met with

in young children, in whom an Anthracosis is out of the question, and, also, because the extravasations are found in all stages of transformation from yellow up to a jet black. In the last case I think there is still less room for doubt. Here the irregular distribution of the pigment in circular patches, not following the interlobular septa beneath the pleura, to which situation it was in great part confined, a situation, moreover, shown by Virchow to be specially prone to extravasations, but, above all, the detection of extravasations in and about some of the pigmented areas, make it tolerably certain that this is a melanotic process. Whether this had any connection or not with the derangement of pigmentation in the skin, as was suggested, may be questioned. Melanosis as it ordinarily occurs is a very different thing from the physiological process of pigmentation. For the former to take place there must be either long continued congestion, amounting almost to stagnation, or else extravasation, under which circumstances the colouring matter of the corpuscles infiltrates the tissues, and there gradually undergoes a granular precipitation, forming the little particles known as melanin. If in a tissue containing cellular elements the bulk of the hæmatin finds its way into them, it may occur in them only; but if the extravasation takes place in the region of a fibrous tissue, like these indurated areas in the lungs, the colouring matter passes by imbibition among the various elements, and we find it there as a granular precipitate.

In the normal process, as it goes on for example in the *rete mucosum*, the cells obtain colouring matter from the nutritive plasma, without any stagnation or rupture of vessels. One pathological condition, met with in the pigmented Sarcomas, adheres to the physiological method, for the cells of these derive their pigment, in great part, from the plasma irrigating the tissue, but according to some observers, also from small capillary hæmorrhages.

It is interesting in this connection to refer to the corpuscles containing red blood corpuscles which were found

in the lungs of several of the kittens experimented upon. Here we have to do with an intravasation, or rather an ingestion of the coloured corpuscles within others. Many deny this, but as far as my observation goes there can be no doubt of the fact. In these corpuscles as many as six to ten were seen, in others again the outlines of the red corpuscles could not be detected, as if the cells had absorbed only the colouring matter. Nuclei and granular protoplasm were also seen—strange constituents, if, as some suppose, the appearance of a cell is caused by the separation of the fibrin round a group of red corpuscles. I have sketches in my possession of amœboid cells from newt's blood crowded with blood corpuscles of the guinea-pig, which were abundant in the serum with which the newt's blood was mixed for examination; and it is not at all unlikely that other amœboid cells, even in the tissues, should do the same thing. This is not a common way for cells to become pigmented, but there can be no doubt that these would rapidly have become so, and would then have been undistinguishable from many of the larger corpuscles containing Indian ink granules. To sum up—

I. The histological examination of these two specimens of miner's lung favours the view that in the early stage the process is confined to an increase in the fibrous elements about the bronchioles and vessels, and in certain emphysematous areas—a genuine Cirrhosis, or, as some would prefer to call it, an interstitial Pneumonia.

II. A considerable proportion of the carbon is contained in large cellular elements, which are specially abundant in the less pigmented, healthy portions, and in these it probably remains without much injury to the lung parenchyma. Another large part of the pigment lies free among the elements of the tissues, this being specially the case in the indurated spots, in the thickened pleura, and at the junction of the alveolar septa.

III. The extraneous origin of the carbon is proved by the detection in the lung of portions of fossilized vegetable tissue in the form of scalariform and dotted ducts.

Report of a successful case of *Tracheotomy in Membranous Croup*. By HENRY P. WRIGHT, M.D., C.M., Ottawa.

Peter Hogan, æt 7. On the night of August 5th. 1875, I was called to see the above who was supposed by his parents to have been suffering from a severe cold for the week previous, at length however, they thought the symptoms sufficiently alarming to have medical advice.

I found the child to be suffering from all the symptoms of membranous croup. Voice whispering, cough frequent and tiring, breathing stridulous, pulse full and regular, temperature 102°, skin moist. They said he had been suffering much in the same way for the past 48 hours.

I gave him at once, half an ounce of wine of Ipecac, emesis was soon produced, ridding him of a good deal of viscid mucus, but no false membrane. I ordered two grains of Iodide of Potassium every two hours and the compound tincture of iodine to be painted over the larynx every six hours.

Aug. 6th. 10 a.m. Found him a little easier. To continue the same treatment.

Towards evening the symptoms again grew worse and at midnight the father brought me such a report that I deemed delay dangerous and sent him at once for Dr. Church to assist me in performing the operation of Tracheotomy. On our arrival we found the symptoms less alarming than we had been led to suppose, so we determined to give medicine and time a further trial. We administered two drachms of powdered alum, this produced full emesis and gave slight relief. We waited for a couple of hours and finding there was no increased aggravation of the symptoms, left with word to continue the Iodide of Potassium.

Aug. 7th. Symptoms continued much the same through the day only the child was evidently getting much weaker. I gave him at intervals an emetic dose of sulphate of copper. At night the symptoms again became worse and at 2 o'clock the dyspnœa was so great as to threaten suffocation. The

pulse became weak and irregular, inspiration stridulous, lips and tongue blue, skin moist and extremities cold. Auscultation revealed almost inaudible breathing, the chest walls bulging above and strongly retracted below. We now considered tracheotomy necessary and proceeded to operate without chloroform. I performed a slow dissecting operation, in doing so however I was unfortunate enough to wound a large venous trunk which was followed by the most alarming gush of blood and was arrested by inserting the finger into the wound and pressing against the sternum. As soon as I withdrew the finger the bleeding recommenced, it was at last controlled, after several ineffectual attempts to ligate, by stuffing up the place till now occupied by my finger, with a piece of soft muslin at hand and then I proceeded in the usual way and reaching the trachea divided three of its rings when brought nearer the surface by an act of inspiration. The tube was inserted at once as I feared the entrance of too much blood into the trachea. I then removed the stuffing and though the bleeding continued for some time after, yet it was not enough to cause any alarm. I feel satisfied that the vein divided was the transverse communicating branch between the anterior jugulars its course being higher up than usual. The child lost about eight ounces of blood.

Aug. 8th. Six hours after operation, respiration easy and regular, has had a calm refreshing sleep. Has had a feed of bread and milk, a good deal of the milk enters the trachea, and is coughed up through the tube. Skin moist and warm, extremities warm, lips and tongue red, countenance devoid of anxiety. Continued nicely through the day. *Diet*, bread and milk, cornstarch and beef tea. The inner tube to be cleaned out every 3 hours.

Aug 9th. Rested well through the night. Pulse respiration ratio normal, temperature normal, deglutition and inclination for food good.

The edges of the wound are rather prominent and have an ashy grey appearance. Applied nitrate of silver and in-

serted beneath the canula plate a piece of soft cotton saturated in carbolic oil—1—16.

Aug. 10th. Slept well, in good spirits. All the symptoms continue favorable, same diet. Bowels moved by an enema.

Aug. 11th. Steady improvement. Symptoms continued good and on the 14th, finding the pulse respiration ratio normal, temperature the same, and having taught him to whistle for two days before, I withdrew the entire tube and dressed the wound with carbolic oil, 1–8. He had no difficulty in breathing after the withdrawal of the tube though he felt a little nervous from want of confidence in himself. The wound healed rapidly, no untoward circumstance interfered with his complete recovery.

Remarks.—The case though highly satisfactory was uncomplicated, the age was favorable and the disease was limited to the larynx. The only difficulty was the hæmorrhage, and, in connection with that we concluded that on future occasions, when it was necessary to extend the incision it would be wiser to cut up towards the larynx than towards the sternum, and that when bleeding did occur no method of arrest could be more effectual than compression by stuffing up the wound with soft muslin or cotton. The whistling which he was made to practice seemed to thoroughly exercise his respiratory apparatus, an exercise so entertaining to the little patient as to be frequently resorted to and well done, and to it I am inclined to attribute a great portion of the ease he experienced after the removal of the tube.

Post-partum Convulsions treated by the Hypodermic injection of Chloral. Under the care of DR. RODDICK, at the Montreal University Lying-in-Hospital. Reported by Mr. A. F. RITCHIE.

F. M., a native of Canada, 26 years of age, short in stature but well proportioned, complexion dark, disposition quiet, personal and family history good, was admitted to

the Lying-in-Hospital pregnant of her second child, the first having been born in natural labour some five years since. On Friday, July 30th, at 3.30 a.m., after ten hour's labour she was delivered of a healthy child, weighiug ten pounds, six ounces. The head presented in the fourth position but was readily changed to the first, and the birth accomplished without difficulty.

Nothing special was observed in the case till about twenty-four hours after delivery, when she complained of violent frontal headache with nausea, followed by repeated vomiting of bilious fluid. This continued till 2.30 p.m. Saturday (thirty-five hours after delivery), when a slight but unmistakable convulsion seized her. In the absence from the city of Dr. D. C. MacCallum the regular attending physician of the institution, Dr. Cline, of the Montreal General Hospital, was called in, who ordered her urine to be examined and found it to contain about ten per cent. of albumem. He accordingly prescribed a brisk purgative and a mixture containing the acetate of ammonia and infusion of digitalis. The first fit was followed at intervals of ten minutes by two others increasing in severity, and the patient rapidly fell into a comatose condition, which became more profound with each attack. The lochial discharge was now entirely suspended. After the first dose of the mixture there was an intermission of about two hours. The convulsions lasted about a minute, the intervals being about ten minutes, although sometimes the fits were almost continuous. When she received the second dose in three hours, an intermission of an hour occurred, after which they returned at short irregular intervals during the night. Brandy and water was ordered, but was swallowed only in small quantity and with great difficulty. The urine seemed to be secreted freely but was voided immediately.

Aug. 1st, 7.30 A.M.—Dr. Roddick has been hurridly called in, as her condition now seems to be most alarming; pulse 140, temperature 100.6. He explained to the students present that it was desirable in such cases to employ

an anæsthetic, but on the present occasion from the urgency of the symptoms he preferred the administration of Chloral by hypodermic injection. A solution in which twenty minims contained seven grains of the salt was at once procured and thrown under the skin of the arm. A convulsive seizure followed immediately upon the withdrawal of the needle, but this proved to be the last, the total number being sixteen. Notwithstanding the cessation of the convulsions the injections were continued at intervals of an hour, the amount being subsequently increased to ten grains. At 2.30 p.m. the coma was less profound; she could feel the needle and tried to remove it, while the eyelids resisted any attempt to separate them. 3.45 p,m—an injection per rectum of turpentine and castor oil brought away a small quantityof fœcal matter; pulse 160, resp. 30. 5.15—very restless, gr. x hypodermically. 7.35 p.m.—pulse 140, resp. 24, bowel well relieved by injection.

Aug. 2nd, 7 A.M.—Has been regaining consciousness rapidly during the night and now swallows beef tea and brandy readily. 3.30 p.m.—Very dull and stupid, but will open her eyes when called in a loud voice and protrude her tongue. No albumen in urine. 11 p.m.—Being very restless and slightly delirious, a draught of gr. xx of chloral was given.

Aug. 3rd—The patient to-day is quite rational though very feeble and easily excited by noise. The cries of another patient in labour in the neighbouring room disturbed her very much. A draught of chloral was again ordered to be given at bedtime.

Aug. 4th.—There is a marked change for the better to-day, being perfeetly quiet and rational; takes abundance of nourishment. There is a hard lump in the cellular tissue of the size of a pigeon's egg where each injection was given, and below the clavicle in the situation of one is a small superficial slough of the size of a ten cent piece. None of them cause her any pain or uneasiness.

Aug. 14th.—She is to leave the hospital to day, and with the exception of two or three brawny swellings and the remains of the small slough referred to, there is nothing to mark the positions of the injections. She is in perfect health.

Hospital Reports.

MEDICAL AND SURGICAL CASES OCCURRING IN THE PRACTICE OF THE MONTREAL GENERAL HOSPITAL.

Case of Morbus Coxae. Death from Pyæmia. Unusual Situation of Head of Femur. Under Dr. Ross. Reported by Mr. R. L. MACDONNELL.

Daniel Fitzpatrick aged 8, was admitted into the Montreal General Hospital in the latter end of the month of June, 1875 and was placed in Dr. Reddy's wards.

He is a weak, unhealthy, cahectic boy, thin and emaciated. His limbs are wasted, the abdomen puffy and large, and the head of abnormal dimensions. Previous to his admission he was an inmate of the St. Bridget's Asylum. The little that could be gathered from his family history revealed the following facts, that his father and two brothers were alive and healthy, that his mother had died of phthisis, that none of the family had exhibited a scrofulous diathesis. Nothing reliable could be obtained as to his own history. He was admitted suffering from pain in the right knee and left shoulder joint. Little could be done in the way of examining these articulations, inasmuch as, even the approach of any one to his bedside caused him most excruciating pain. He was by Dr. Reddy, placed on alkaline treatment, which gave him no relief. An abscess was soon detected in the left shoulder, pointing on the anterior aspect of the joint. This was opened, and a quantity of pus evacuated. He then, on the 1st July came under the care of Dr. Ross, who discovered a large bag of matter on the upper and inner part of the left thigh. The abdomen was also swollen in the left iliac region, and in both situations fluctuation could easily be made out. The patient was anaesthetized, and the needle of an aspirator inserted into the femoral abscess, ten ounces of dirty, unhealthy and very fœtid pus were

drawn off, the abdominal enlargement disappearing as the fluid came away. While under the influence of the chloroform a thorough examination of the joints was instituted. The legs were equal in length. Rotation of the left thigh showed great roughening of the cartilages, and grating could be felt and heard. In a few days, as no discharge came from the puncture made by the aspirator needle, and as the sac of the abscess again became filled with matter, an incision was made into it with a Symes' knife, and a quantity of matter allowed to escape. A few days after this a second incision was made lower down the thigh and a drainage tube was inserted.

July 15th. The patient complained of pain in the wrist joint, and on examination that structure was found swollen and excessively painful. Motion was absent, the tissues around the carpus were thickened. He carried the joint in a curious manner, the carpus was extended on the radius, while the hand from the carpo-metalcarpal articulation drooped. Dr. Ross ordered a small anterior splint, as well as blisters above the seat of disease.

The constitution is very much involved, the pulse has been frequent, small and weak, the temperature is also elevated. Diarrhœa has been present at several periods in the course of the disease but has been checked by M. Cretae Co. combined with Extract Rub. Villos. He is taking tonics with wine.

July 17th. His left thigh is abducted, the leg and foot everted, the thigh is flexed forcibly on the abdomen and the leg on the thigh. The abscess is discharging freely and is daily injected with a weak solution of carbolic acid. —Carbolized tow is applied to the wound, and exercises a great influence in suppressing the fœtor.

July 20th. Complains of pain in abdomen, which is tender to the touch and tympanitic. M. Cretae Co. however gave him relief.

July 24th. A large abscess was noticed for the first time, to-day. The situation is over the right hip, and its sac ex-

tends upwards and inwards over the right buttock almost to the sacrum, downwards as far as the insertion of the tensor vaginae femoris. Chloroform was administered, the matter removed, and a drainage tube applied. The matter evacuated resembled that from the other side but if possible was more fœtid. A similar dressing was ordered viz., carbolized tow and carbolic acid injections.

July 25th. Both abscesses are running freely and the dressings require constant change. Every now and then there is fullness in the left iliac fossa which disappears on the application of a poultice to the openings in the left thigh.

July 27th. Pain is complained of in the right knee. The limb is flexed, and any attempt at extension causes intense pain. The joint is hot and tender. A pillow was placed under it and warm fomentations applied. This gave great relief.

July 29th Affairs in much the same state. The constitutional disturbance seems greater, the patient being very much debilitated by the constant drain of pus. Diarrhœa, with foul evacuations is present.

Aug. 23rd. The condition is a little improved. The right knee was extended, and after no little resistance the patient was induced to retain it in that position. There is now great atrophy of the forearm. A splint is still applied to the wrist joint.

Aug. 4th. Pulse and temperature high. The former is very weak and compressible. The patient was delirious during the night and there is a great deal of perspiration. Cutaneous hyperæsthesia is present, and even the insertion of a thermometer into the axilla seems to cause pain.

Aug. 5th. Delirium persistent. At 4 30 p.m. had an attack of convulsions and died at 6 p.m.

Post Mortem Examination.—Eighteen hours after death. On manipulating the left thigh, there was great roughening found and the head of the bone felt quite loose in the acetabular fossa, there seeming to be nothing whatever to retain it in its place. The head of the right femur moved quite

freely about and by no means could roughening of the joint be detected. The left leg was shorter than the right by about an inch.

The Brain, was very large and well developed for a boy of his age, it weighed 48 oz. The arachnoid was thickened and opaque though no distinct deposit of lymph could be seen. The opacity was greatest on the upper surface of the organ, but under the fissure of Sylvius, in the vicinity of the island of Reil there was a small area of yellowish discolouration. Under the arachnoid there was extensive effusion (3½ oz) of a sero-purulent fluid. The convolutions of the hemispheres were distinctly marked and widely separated. The vessels on the surface of the brain were slightly congested. On section, the centrum ovale majus was preternaturally white. No central softening could be discovered, the formix however, seemed a little too friable. The ventricles contained a small quantity of fluid.

Thorax.—Heart healthy with a firmly contracted left ventricle. No effusion in the pericardial sac.

The lungs were adherent to the chest walls in several places. The base of that of the left side was hardened and collapsed, and fragments of it would not float in water. The right lung and the upper lobe of the left were healthy, though a little deficient in pigmentary material. Liver slightly enlarged.

The capsular ligament of the left hip joint was entirely obliterated. The cavity of the joint, as well as adjacent structures were bathed in pus. The upper end of the femur, exceedingly necrosed, rested in the acetabulum. This cavity was enlarged, oval in shape, and extensively diseased but was not perforated. On extending the incision backwards the epiphysal extremity of the head of the femur was found lodged in a fossa behind the brim of the acetabulum, resting on the great sacro-ischiatic ligament, which was partially disorganized. The bony part of the epiphysis was intact but it was stripped of its investing cartilage. I attribute this extraordinary state of affairs to the position in

which the patient used to hold the limb, and advance the idea, that in the extreme state of flexion in which the femur was retained, there being no capsular ligament, the head of the bone passed partially over the brim of the acetabulum, and that, while in that position, the pressure of the brim on the disk of cartilage joining the epiphysis with the neck of the femur, caused its disorganization. The epiphysis then, separated from the neck in this way, dropped over the brim and became lodged in the great sacro-ischiatic notch and found a resting place in the pulpy and disorganized tissues.

The remaining ligaments of the joint could not be found, and the bone was held in its place merely by the action of the muscles adjacent to the articulation. On the inside of the pelvis on the left side there was a large bag of pus, lying between the iliacus muscle and the iliac fascia, and communicating with the abscess on the inner and upper part of the thigh through the great sacro-ischiatic notch.

The capsule of the right hip joint was entire but full and tense. On making incision into it, a large quantity of pus escaped. The ligaments on that side were not diseased, with the exception of the ligamentum teres which was entirely destroyed. The cartilaginous covering of the head of the bone was slightly eroded and caries had just commenced in the fundus acetabuli, in the situation of the Y shaped piece.

The wrist joint contained a small quantity of pus, mingled with its synovia. There was great lack of motion in the joint.

Periscopic Department.

SURGERY.

On Tracheotomy in Croup and Diphtheria. By GEORGE BUCHANAN, M.A., M.D., Professor of Clinical Surgery in the University of Glasgow.

The prevalence and fatality of diphtheria of late years, as may be seen by a perusal of the Registrar-General's returns, has drawn the attention of the profession to the etiology of that disease, and has recently given rise to a controversy

as to the identity or non-identity of croup and diphtheria. Many able papers have appeared in the pages of the British Medical and other journals on this subject, and to them I refer those interested in the question; but there is one point of resemblance which is of the utmost importance in a practical point of view. Although the two diseases may be as distinct as to cause, course and sequelæ, as scarlet fever is from simple tonsillitis, yet both are characterised by the effusion,on the mucous membrane of the air-passages, of a tough false membrane. This membrane may differ in its nature and in situation, at least at the commencement, but the tendency in both cases is to obstruct the breathing and cause suffocation.

This seems so self-evident that I must almost apologise for mentioning it; but I have been so often met with the objection that, because the primary disease causing the effusion is diphtheria and not croup, therefore it is hopeless to interfere, as the operation will not cure the specific disease, that I have considered it not out of place to introduce it. We might as well refuse to open an abscess of the tonsil which was about to choke a patient suffering from scarlatina, because the operation will not cure the fever, as refuse to relieve a patient from instant death from suffocation because the operation is not a cure for diphtheria.

Now, the point I wish to bring out is, that there is a stage both in croup and in diphtheria at which it becomes evident that recovery is hopeless and death from suffocation certain. It is quite true that it is exceedingly difficult to say when that stage has arrived, and mistakes may sometimes occur; but I believe practically it is better to err on the safe side, and acknowledge the inefficacy of treatment, rather than delay till it is too late to resort to the last resource. Tracheotomy *per se*, though a difficult, is not a dangerous operation; and I, for one, would be inclined to urge its performance before the strength of the little sufferer has been brought to the lowest ebb by the struggles which result from the approaching suffocation.

I wish, however, clearly to guard myself from being supposed to advocate tracheotomy in all circumstances of approaching death from croup or diphtheria. I have elsewhere explained my views on this subject, but I cannot avoid referring to them again.

The diseases in question, but especially diphtheria, when they prove fatal, cause death in one of two ways; either by exhaustion or by suffocation. Hence, we may say there are two varieties, viz., the asthenic and the sthenic. In the great majority of instances, croup is a sthenic inflammation attended with effusion of lymph in the trachea, and proves fatal by suffocation. In some cases, however. the attack is attended with such a depression of the vital powers that the patient sinks apparently from the virulence of the disease. This, however, is a rare case. But in diphtheria there are two well marked types: the sthenic, which closely resembles an attack of sthenic croup, except that the effusion of lymph begins on the fauces and extends through the glottis into the trachea; and the asthenic, which more closely resembles scarlet fever, and in which the effusion covers the whole of the mucous membrane of the fauces, tonsils, and even the pharynx, and in which the false membrane soon becomes foul, putrid, ichorous, and contagious.

In the former of these types, the danger is suffocation; in the latter, it is vital depression, death from asthenia.

Now, with regard to the treatment of these affections at the early stage, I wish here to make no reference; the scope of my remarks is the duty of the medical attendant, when medical treatment has failed, or is clearly failing to arrest the disease. And I think that it is very important that medical practitioners, especially those commencing practice, should be supported by the opinion of those qualified to advise them in such a delicate matter as this, seeing it is a most painful and disagreeable task to advise parents to submit their children to such a repulsive proceeding.

I believe, then, that I am justified in calling on all those who have seen much of these diseases to unite with

me in asserting that, when medical treatment has been fairly tried and when it is proving unavailing, and when death seems imminent from suffocation, not from vital depression or exhaustion, it is the duty of the medical attendant to perform, or advise the performance of, tracheotomy.

I know that here I shall be met with the objection that some cases which seemed hopeless have ultimately recovered; but these isolated examples are very few in number, and are counterbalanced out of all proportion by others in which delay, owing to repugnance to the operation and a hope that symptoms will improve, has deprived the patient of that chance of life which the surgeon can offer.

In pressing this view on my medical brethren, I am aware that I am adding nothing new to what has been frequently advanced by those who have had occasion to operate much in croup and diphtheria, but every year convinces me that it is the duty of those whose experience qualifies them to speak with authority on the matter, to reiterate their convictions, even if it be in nearly identical terms.

Last December, I was called to a case of croup, and when I arrived I found the child, a girl seven years of age, in the last stage of suffocation. The two medical gentlemen in attendance declared that the patient was beyond the reach of surgery. One of them, who had never seen the operation, strongly dissuaded me from making the attempt; the other, who had at one time been one of my clinical students, on hearing my wish to give the child a chance, persuaded the parents to consent. The little patient was livid, and though I did not use chloroform, as I usually do, it did not wince when I made the incision through the skin. The result was that the child is now alive, and in the enjoyment of excellent health.

To one who sees the operation for the first time, the hopelessness as to the attempt is only equalled by the surprise and gratification at the result.

But, while I am so strongly advocating the operation in the circumstances referred to, there is one condition in

the suffocative form of those diseases which contra-indicates tracheotomy, and which, if discovered, should prevent any one from performing it. When the suffocation depends not only on obstruction of the trachea, but also on effusion of false membrane or the glutinous fluid which precedes it, into the smaller bronchial tubes, then the case is not one for operation. The difficulty, then, is to discover when the false membrane which causes the obstruction to breathing is limited to the trachea and larynx and when it has invaded the bronchia. Percussion and auscultation ought to assist in the diagnosis, but the restless tossing of the child and the noise of the breathing always make this a difficult proceeding.

There are two signs which appear to me to be valuable guides ; one is the amount and loudness of the stridor, which is always great in proportion to the patency of the small tubes and obstruction in the trachea.

But the most valuable test is a view of the naked chest. When the obstruction is in the trachea, while the bronchial tubes are free, the respiratory movements are continued with exaggerated energy, but the chest will not respond to the muscular efforts. The result is that at each inspiration the flexible parts of the thoracic walls are drawn in with great force, the intercostal spaces are hollowed, and the ensiform cartilage sucked back. But when the small bronchial tubes, and, perhaps, the air-cells, are stopped with the viscid or membranous effusion, the muscular efforts are more feeble and the chest remains puffed out, and the whole aspect is that of a child thirsting for breath, but with the lungs already full and themselves unfit for respiration. In this latter case, I never operate ; in the former, with every hope of success.

This is not the place to enter into details with regard to the operation, which vary in many respects in different cases ; but one thing may be impressed on the young operator by one who has had considerable experience ; and that is, that tracheotomy is not the simple plunge of a knife into

the trachea that many suppose, and that can be easily effected in the bloodless neck of a subject on a dissecting-room table. It requires coolness and patience on the part of the operator. Sometimes the trachea can be exposed by very little dissection; at others, numerous obstacles come in the way, especially in young children. Amongst these may be mentioned overabundant cellular tissue and fat, turgid veins, isthmus of the thyroid gland, which is very large in infancy, and protrusion into the wound from below of the thymus gland, a frequent cause of surprise and annoyance to those who are not forewarned. In consequence of these possible complications, the operation must be done slowly and systematically, obstacles turned and held aside, bleeding vessels secured; and the golden rule is that the trachea is never to be opened till its white rings are seen clearly at the bottom of the wound.

The following table contains an account of my operations of tracheotomy in croup and diphtheria, and the respective results.

Case	1.	Croup;	aged 6.	Cured.
"	2.	"	" 3½.	Death in three hours.
"	3.	"	" 3.	Death immediately.
"	4.	"	" 1¼.	Death in sixteen hours.
"	5.	Diphtheria;	" 2.	Death immediately.
"	6.	"	" 2½.	Death in six hours.
"	7.	Croup;	" 1½.	Death in eight hours.
"	8.	"	" 3.	Death in twenty-four hours.
"	9.	Diphtheria;	" 4.	Cured.
"	10.	"	" 2½.	Cured.
"	11.	"	" 1¾.	Death in twenty-four hours.
"	12.	Croup;	" 5.	Cured.
"	13.	Diphtheria;	" 2½.	Death in forty hours.
"	14.	Croup;	" 5.	Cured.
"	15.	Diphtheria;	" 5.	Death in twenty-eight hours.
"	16.	"	" 5½.	Death in five days.
"	17.	"	" 6.	Cured.
"	18.	"	" 3.	Death in four days.
"	19.	"	" 3½.	Death in seven days.
"	20.	"	" 2.	Death in five days.
"	21.	"	" 2½.	Cured.
"	22.	"	" 6.	Death in two days.
"	23.	"	" 5.	Cured.
"	24.	"	" 8.	Death in thirteen days.
"	25.	Croup;	" 1½.	Death in six hours.
"	26.	"	" 5.	Cured.

Case 27.	Diphtheria ;	aged	5 .	Death in five days.
" 28.	"	"	7 .	Cured.
" 29.	Croup ;	"	5 .	Death in three days.
" 30.	Diphtheria ;	"	5 .	Cured.
" 31.	"	"	2 .	Death in two days.
" 32.	Croup ;	"	2½.	Death in two days.
" 33.	Diphtheria ;	"	5 .	Death in six days.
" 34.	Croup ;	"	9 .	Cured.
" 35.	"	"	4 .	Death in three days.
" 36.	Diphtheria ;	"	8 .	Death in eight days.
" 37.	"	"	7 .	Cured.
" 38.	"	"	7 .	Death in three days.
" 39.	"	"	5 .	Cured.
" 40.	"	"	5 .	Death in two days.
" 41.	"	"	4 .	Death in three days.
" 42.	"	"	6 .	Cured.
" 43.	"	"	4 .	Death in two days.
" 44.	Croup ;	"	7 .	Cured.
" 45.	"	"	9 .	Death in four days.
" 46.	Diphtheria ;	"	6 .	Cured.

Total cases of Tracheotomy,	46.	Cured 17 ;	Died 29.
Tracheotomy in Croup,	16.	Cured 6 ;	Died 10.
" Diphtheria,	30.	Cured 11 ;	Died 19.

The average result is precisely the same, viz., one child is saved out of every two and two-thirds operated on ; and, as the operation was always done when there seemed no hope of recovery otherwise, it may safely be stated that the lives of these seventeen children were saved by tracheotomy —*British Medical Journal.*

A new Hospital in Paris.

A new hospital, to be named the Ménilmontant Hospital, is to be opened towards the end of the year in the part of Paris from which it derives its name—one of the poorest quarters. It is situated between the Lariboisière and Saint-Antoine Hospitals, and will contain 150 beds. It consists of isolated pavilions. The wards are large, and none will contain more than twenty-two beds ; there are numerous rooms with one, two, three, or four beds. Each ward has its own staircase : and in the centre of each pavilion is a separate staircase for conveying provisions. The pavilions are surrounded with open galleries, for the use of convalescents in fine weather. Independent of the hospital, there is a lying-in institution consisting of isolated wards.—*British Medical Journal.*

CANADA

Medical and Surgical Journal.

MONTREAL, OCTOBER, 1875.

PREVENTIVE MEDICINE.

The object of the science of preventive medicine is not the treatment of disease when it occurs, but the prevention of the occurrence of disease when threatened. In this country, Canada, much has to be done to give us the means of ascertaining facts with regard to the prevalence of diseases. Before these facts are attainable we must introduce or inaugurate a system of observation. This system of observation is comprised in a definite system of registration. The Government calls upon the people of this country to contribute large sums to keep up its various establishments. This money is cheerfully accorded, because the machinery of the Governmental system is felt to be a necessity.

In the various cities throughout this country sanitation is attracting attention, the people themselves feel that something ought to be done to insure at least public confidence, but what that something should be is indefinitely understood. Improved Governmental organization, or the inauguration of a definite system of observation would render valuable the efforts of the authorities of cities and towns so that they might be of advantage to local improvements in various necessary directions. It is not by a few spasmodic efforts on the part of certain communities that general benefit is to be expected.

If we take as a warning the experience of Great Britain we will find that sanitary legislation became cumbrous and entangled. Sanitary legislation appears to have taken its

rise in Great Britain some thirty years ago when the Imperial Parliament passed an Act, which was generally comprehensive, to promote the health of towns. Since the passing of that Act, numerous other Acts, some twenty-nine in number, have supplemented it, so that experts in hygiene and law became bewildered, as the accumulation of sanitary legislation was such that they were comparatively inoperative. Some year or two since, this being an acknowledged evil, a Royal Commission was issued under the presidency of Sir Charles Adderley, a codification or consolidation of all the Acts resulted, and during the past session the present Government of Great Britain repealed the Acts of previous years, and introduced a consolidated statute, containing all the points of value in the repealed Acts, which became the law of the land.

In Canada we are without any sanitary legislation. The Government of this country has recently introduced and passed a law in reference to the adulteration of food, liquors and drugs, and we believe that public analysts have been or are about to be appointed. This is all very well and very necessary but is a mere item in the many legislative enactments which are required for this country. In looking into this subject we must be fully prepared for its vastness and if wisdom guides our counsels we will try and take advantage of the teaching which legislation in other parts of the world affords. Laying aside all theory, we know as a fact, disease of whatever kind, will become more prevalent, more virulent, more fatal, and more permanent, in localities, where sanitary laws are ignored It appears to be the scourge for the neglect of those ordinary rules of cleanliness which contribute to our comfort, if they do not improve our health. Wherever sanitation is laid aside, epidemic disease will arise, and with the sword of the destroying angel do its deadly work of destruction, until appeased, by arousing to a proper sense of the evil of neglect, a better condition of things amongst the sufferers.

Certain epidemics have seemingly disappeared by the improvements of modern modes of living. The plague which spread over Europe some two hundred years ago decimating whole communities has apparently been shut out by sanitary barriers of modern times although it is a disease still known to the inhabitants of the East, and is still as fatal and as contagious as of old. In the matter of small-pox, it has been remarked that this disease occurs in the epidemic form very frequently, every four or five years. From 1837 to 1842 small-pox was prevalent in a very virulent form throughout Europe and indeed extended to our own side of the Atlantic. The mortality from small-pox during this epidemic was considerably higher in the United Kingdom than in continental countries. Vaccination had been voluntarily submitted to, and very generally practiced up to this period in Britain, but in consequence of the virulence and general prevalence of this epidemic, a reaction occurred and persons were numerous who absolutely refused to submit their children to the protective influence of vaccine. This led to legislative interference and by a succession of Acts, compulsory vaccination was at length introduced into the United Kingdom.

Previous to the introduction of these laws three fourths of the cases of death from small-pox occurred amongst children under five years of age. In the epidemic of 1870, less than one third of the deaths from small pox in England and considerably under one fourth of the deaths from this cause in Scotland and Ireland were observed in children under that age. Let it be stated furthermore that when the epidemic of 1870 occurred a large proportion of the children under five years of age were unprotected by vaccination. Another significant fact has been established in respect to the recent epidemic of small-pox. During previous epidemics continental Europe suffered less in proportion than Great Britain; in the epidemic of 1870 the proportion of deaths from small-pox in some of the large towns on the continent was in many instances six to one

of towns of the same size in Great Britain. To sum up we may give the figures of the late Sir James Y. Simpson in an article which appeared shortly before his lamented death, as proving the beneficial influence of Dr. Jenner's great discovery, in saving from death from small-pox, some 80,000 persons annually, provided the same rate of mortality from that disease existed as did exist at the close of the last century ; whereas, the present annual average mortality in Great Britain is about 5000 souls—all too many when it is conceded on all hands that small-pox is a preventible disease. We have illustrated small-pox in this connection because it is prevalent throughout this country at present, but the same may be said of other contagious diseases.

On a recent occasion the Right Honorable Dr. Lyon, Playfair, M. P., in speaking about the House of Commons and sanitary matters, stated that, "the distinguished man who is now at the head of the Government" had said to that house "that the keynote of the parliament was to be 'Sanitas Sanitatum omnia sanitas' * * relating to all subjects connected with the social welfare of the people, he (the speaker) had always admired this, that the House of Commons, of which he had the most experience, forgot altogether that it was divided into two great political parties, and acted as one body in trying to frame measures most productive of good for the public interest." We can only utter a fervent hope that the Government of this Dominion will take a leaf from the British House of Commons and in legislating for the people cast aside all the littleness of party politics and engage in the earnest and much needed reform of sanitary legislation.

We have great pleasure in announcing that our friend and colleague Gilbert Prout Girdwood, M.D., M.R.C.S. England, Professor of Practical Chemistry McGill University, was on the 26th August last elected a member of the Society of public Analysts of Great Britain.

We observe with regret that our old and esteemed friend Sir Duncan Gibb of London, England, has resigned the office of physician to the Westminster Hospital in consequence of the state of his health. Sir Duncan has we believe, recently suffered from an attack of pleuro-pneumonia, but we sincerely hope that rest from the arduous public duties of physician to a large hospital will enable him to rally from his attack of illness and that many years of usefulness may be added to his career.

AS OTHERS SEE US.

The British Medical Journal of September 4th in an editorial item under the heading Anti-vaccinators at Montreal says—"Montreal has been recently the scene of some dis- "graceful rioting on the part of anti-vaccinators. It appears "that of late years, small-pox has been very prevalent in "the city, especially amongst the French Canadians; and "in consequence the Provincial Government passed an Act "to empower the municipalities to enforce vaccination. "This, however, has been strenuously resisted by the French "section of the community, under the leadership of a Dr. "Coderre and other *savants* and a mob of 7000 roughs as- "sembled a few Sundays since, who stoned the aldermen "and gutted the house of one of the vaccination supporters, "and in other ways conducted themselves in an irrational "manner. The police were utterly powerless against the "rioters, whilst, as a natural collateral incident, severe "small-pox still prevails." There are several inaccuracies in this brief account, but it is sufficiently correct to show how we deserve this reproach. It is to be regretted that there should be amongst us men willing to excite to opposition a few fanatics, to that degree as to lead to a serious breach of the peace. For the information of our contemporary however, we would state that the "French section" alluded to, are a very small part of that nationality in our city, anti-vaccination views are by no means believed in by the large majority of our fellow citizens of French descent.

The more educated portion of our French Canadian citizens are as firmly impressed with the value of vaccination as a means of lessening, at least, if it does not actually stamp out small-pox, as are their fellow citizens of British extraction. The riot in question did not so much arise, so far as we can learn, from a desire to oppose compulsory vaccination, as it was a forcible condemnation of a by-law which was about to be submitted, but which we believe never would have been accepted by the City Council without such modifications as would have deprived it of many objectionable features. We abstain from saying more on this subject at present. We understand that the matter is before our criminal tribunals and we suppose that the rioters will be equitably dealt with by the law. We may moreover state for the benefit of our contemporary that Dr. Coderre did not, we believe, lead the mob of 7000 roughs at the time they stoned the aldermen, and gutted the house of one of the medical health officers.

PRSCRIBING LARGE DOSES.

At the Pharmaceutical congress held at Bristol on the 25th and 26th August last, the President Mr. Groves in his opening address observed in substance as follows: That it was to be regretted that in prescribing extreme doses the prescriber did not indicate by some sign that such dose was intended. There should certainly be a means of indicating to the dispenser that the prescriber knew he was ordering an unusually large dose, and that he meant it. This would prevent the assumption on the part of the dispenser that there must be some error, and that in the exercise of his own discretion he should dispense a smaller dose. For instance, quite recently we heard of an apothecary who exercised his own discretion in dispensing a dose of quinine, that had been ordered for a patient with typhoid fever, and instead of giving the patient twenty grains which was prescribed by the physician, he gave two, of course the two grains failed to produce the expected lowering of the temperature which would have followed

the exhibition of the larger dose. The physician suspected the cause, procured the quinine and-dispensed it himself with a very different result. This we mention, as we think in justice to both parties, some means should be adopted to give the dispenser notice that the prescriber is in earnest in prescribing a larger dose than usual.

ZIEMSSEN'S CYCLOPEDIA OF THE PRACTICE OF MEDICINE

Many of the subscribers to this great work are aware that the Volumes of the German Edition are not being issued in regular succession—some of those treating upon subjects of greatest interest having the precedence, although numbered to conform to the plan of the entire work. It has been concluded to follow the same course with this translation; and in compliance with the expressed wish of many subscribers, Volume X., SCHROEDER'S "DISEASES OF THE FEMALE SEXUAL ORGANS," is now published. Volumes IV. and V. will follow, the former to be published in December next and vol. V. in March, 1876. Vol. X., is issued from the press amply illustrated, the wood cuts, one hundred and forty-seven in number are of superior finish and add considerably to the value of the work. They are not a repetition of cuts to be found in other books on this subject, but are new in design and give a tolerably correct view of cases which have come under the authors observation. We congratulate Messrs Wood & Co., on the excellent finish of these books so far as received, and we believe that at the completion of the work, those subscribers who have secured a copy of these volumes will possess an invaluable cyclopedia, one which few real students can afford to be without. The publishers have announced their intention to refuse the supply of single volumes. The work will be published alone for, and issued to subscribers. Let all desirous of supporting this vast undertaking send in their names forthwith to Messrs. William Wood & Company, 27 Great Jones street, New York.

We have received from a friend in Chicago the copy of a circular which we understand is being distributed from door to door in that city. We should not take any notice of this thing were it not that there are some inacuracies contained therein which demand contradiction. The circular reads as follows:—

NO CURE. NO PAY.

H. R. BIGELOW, M. D.

Of McGill University, Montreal, and of Laval University, Quebec, late lecturer on Nervous Diseases at the Indiana State Medical College, can now be found at

253 W. Madison St., cor. Sangamon

where he will examine all who may call at above place

FREE OF CHARGE.

TAPE WORMS REMOVED IN THREE HOURS.

As one of the staff of the Lying-in Hospital, of Montreal, he has had large experience in the treatment of female complaints, to which he gives especial attention. Ladies suffering from Flexions of the Womb, Leucorrhœa (Whites), Prolapses, etc., can obtain positive relief. Whites cured in three days.

Now, with regard to this circular we may state that no such person as H. R. Bigelow holds the degree of M.D., from McGill University, nor is he a graduate in any of the faculties of that University, nor does there appear the name of H.R.Bigelow on the list of graduates of Laval University, Quebec. In this advertisement the person calling himself H. R. Bigelow, M.D., states that "as one of the staff of the Lying-in Hospital of Montreal, he has &c." Now, we do not know to which lying-in hospital H. R. Bigelow formed one of the staff. It appears to us he is lying in the face of it as no hospital in this city ever had any connection with any such person, as a member of its staff as H. R. Bigelow, M.D. We might request our medical exchanges to pass this round, as H. R. Bigelow, M.D., may be a travelling doctor, and may in all likelihood appear in some other city than Chicago, but perhaps our contemporaries may think with the countryman, "what pleases him, doesn't hurt I," and therefore where the use of circulating this man's unblushing advertisement; we agree with this in principle, but as this choice morceau, contains lies with regard to the connection of H. R. Bigelow with some of our Canadian Institutions we deem it a duty to give them a flat denial.

CANADA

MEDICAL & SURGICAL JOURNAL.

ORIGINAL COMMUNICATIONS.

Introductory Lecture delivered on Friday, 1st October, 1875, at the opening of the forty-third Session of the Medical Faculty of McGill University, by GILBERT PROUT GIRDWOOD, M. D., M. R. C. S. England, Professor of Practical Chemistry.

GENTLEMEN,—In conformity with the requirements of a time-honored custom, and in obedience to the request of my colleagues, I appear before you to deliver the introductory address on this the opening day of the 43rd session of the Medical Faculty.

Gentlemen, in the name of the Professors of this Faculty I extend to you all a hearty welcome, and hope that you who have been rusticating during the vacation have returned with renewed energy to the work before you.

Allow me to call your attention to a few changes which take place this year in the professional staff.

Dr. Campbell retires from the active duties of the chair of Surgery; and here let me offer to him the expression of deep regret at the loss we suffer by the step he has felt himself obliged to take, and in this regret we must not forget the large share we have had of his energies, in the exercise of his duties of teacher in this faculty, and for which this university has bestowed on him the rank of Emeritus Professor. Many of you gentlemen, doubtless, feel this regret more than I can, from the fact that you have been for a longer period the associates of his toils, and been honored with his friendship, and have for a longer period enjoyed

his society and friendly counsels ; among you are perhaps some at whose nativity he was present, and at whose birth your mother received his fostering care and attention, for Dr. Campbell was a teacher in this school at a time when many of you were in your cradles.

But, gentlemen, our regret is tempered with pleasure, and like a medal has its obverse and reverse.

We rejoice in the fact that we are able to keep our good and talented friend with us as Emeritus Professor of Surgery, and that we still are able to have him with us as the Nestor of our councils, giving us the benefit of his vast experience and mature judgment, professionally, as Professor, and as our Dean.

That he may long live to be present with us to assist and direct us is not only the wish and the hope but the earnest prayer of us all.

By Dr. Campbell's retirement the chair of Surgery becomes vacant, and is filled by our tried and trusty friend Dr. Fenwick, who is already so well known not only to us and to you, but the world over, for his success as a surgeon and his labours as a journalist, and I may add as well loved as known by all who have the pleasure of his friendship.

We have also to regret the loss of our colleague Dr. Drake, who has been obliged to give up the labours of teaching on account of ill health.

To him we must express our heartfelt regrets at the cause which has necessitated his retirement, and tender him our hopes that the relaxation he will be enabled to obtain will restore him to health, and long may he live to enjoy the honour, that of Emeritus Professor, conferred upon him by this college for his services as teacher. The remaining changes in the staff result from the retirement of these two gentlemen. Dr. Osler takes the chair vacated by Dr. Drake, the Institutes of Medicine.

Dr. Roddick succeeds to clinical surgery lately occupied by Dr. Fenwick, in conjunction with the chair of Medical Jurisprudence, in which latter course the chair is filled by

Dr. Gardner, who lately held that chair in the Lennoxville School. Dr. Godfrey has been appointed to the chair of Hygiene, and Dr. Shepherd as Demonstrator of Anatomy.

Thus the Governors have endeavoured to fill up the vacancies consequent on the retirement of their friends with the best talent that the country affords, and we, gentlemen, will endeavour to uphold the position of our Alma Mater, as a school of learning, and in this endeavor we hope to have the cheerful and unwearied co-operation of all the undergraduates.

It is difficult after so many able predecessors have gone over the ground before me, to find a subject whereon to address you. The history of our science has been traced from its beginning to its present date by abler hands than mine. I shall therefore content myself with a few remarks for the guidance, especially for those who now, for the first time are present within these portals ; and trust that they may find acceptance with the elder students who have listened to the eloquent addresses that have been given here in former years. Gentlemen, we meet here to day to inaugurate another year of work, it is well for us at this moment to cast a retrospective glance at our past labours and examine our parts, to see if the work already performed meets with our entire satisfaction, or if in any way we can improve on what has been done. Some of you have had experience and are now entering upon your last year of study, and to you but scant time is left to repair any shortcomings in the performance of your duties. I trust few among you will be able to condemn yourselves on that score.

Should there be one, however, I trust he will take warning and lay down a specific rule for action, allotting to every hour its proportion of labour, and so toil on that by the end of the session all gaps may be filled, and on the day of trial he be not found wanting.

On you, gentlemen, who this day for the first time take your seat on those benches as students, I would urge the

necessity of self-examination to determine whether or no you have considered the duties you are undertaking. Whether the selection you have made of medicine as a profession is all that you could wish for in an occupation. Be assured that the art and science of Medicine and Surgery is no mean mistress to be toyed with for an hour and cast off at your pleasure, she is exacting, and demands of you the most ardent and intense devotion of your first love, and if you freely give that devotion she will not be backward in repaying you for you toil.

Should your self-communion lead you to doubt if you are quite sure of yourselves, then reconsider your decision and if you arrive at any adverse opinion, retire from the profession, and seek some occupation more in consonance with your ideas of life.

Let us see what is required of the student in medicine:

You come here under the supposition that you have received a liberal education, and the more liberal and extended that education has been the more easy you will find the after steps, which lead you to the study of the hidden mysteries of nature and science. These studies being arrranged for a period of four years, you will, if wanting in preliminary knowledge, have hard work to make up for those deficiencies.

You now have your professional studies to go through and they require of you a total abnegation of self, you must be ever ready to attend to any duty you may be called upon to perform, for accidents happen at all sorts of inconvenient hours, and at last having passed your examinations with flying colors, and been rewarded for your proficiency by your license to practice you commence the hard experiences of life.

It is needless to remind you of the oft-told tale of ill-requited toil, that has often before been mentioned to you, but gentlemen, you have selected a profession which has for its object the alleviation of human suffering. What more ennobling object can a man have in view.

In such high estimation was it held by the ancients that they deified the most celebrated physician Œsculapius.

The history of our profession dates to the earliest ages of man, for with his appearance on this globe his ills commenced and with them attempts to relieve them.

As our knowledge increased experience began, and records commenced on all subjects.

All sciences, as we now know them, are but the vast chaos of human record from the remotest ages, organized and reduced to system and order by the master minds whose names we look back to with admiration and reverence, that they had been able to accomplish so much with such poor appliances as they had to work with ; and whose names stand out as goals to be won and as examples to be imitated.

In our days when the field of labour is so extended, it has became the custom to divide the whole field among a number of hands, and for each to select his own special department for the most perfect cultivation.

In medicine this system of division of labour has been elaborated and we have our specialists. It is, however necessary for a member of our profession, before becoming a specialist to make himself proficient in the general knowledge thereof, and more especially is this the case in this country where the field of your labours will be largely extended through a sparsely populated district.

In large cities you may give up the general practice to become a specialist, but in the country you must be able to act at once in every case you may be called upon to attend.

Therefore cultivate all the brances of your curriculum and your profession

Your student life has for its object not merely the cramming you to pass an examination, although that is by law rendered a necessity, and rightly so ; it has for its object the rendering you qualified to treat a case of disease whenever and wherever you may be called upon, and you must be ready to act on the moment ; there is no waiting to consult authorities, you must have your knowledge at your

finger ends ; you must not only know but you must be able to at once apply that knowledge.

A human life is hanging on your ability to do the right thing at the right moment.

How is this to be obtained ?

Only by indefatigable industry and punctual attendance to your duties as students.

In the curriculum laid down for you, you have the advantage of the guidance of those whose judgment of what is necessary has been matured in the field of practice, and you are the fortunate husbandmen who are the reapers of the rich harvest the result of the toils and labors of your predecessors.

And having reaped that harvest it will become your duty to till the soil by diligent work, that when you are called away from the abode of men you will feel that the talent that was committed to your charge you have utilized to its fullest capacity, and you have left your successors a good account with interest added.

In the course of the lectures you are called upon to attend you will be led by degrees from the groundwork of medicine, through various stages to the most profound theories of human disease. From the bony skeleton, the framework and support which carries the soft parts to the most complicated structures to the generation of thought, a perfect whole.

Be careful to lose no opportunity of becoming acquainted with human anatomy, and rest not satisfied with human anatomy alone, study along with it, the anatomy of the lower animals, for upon them you will have to make experiments to carry out original research, and by analogy you will be able to interpret the signs and symptoms of disease.

In Botany you will be taught the structure of parts of plants, and their functions, their modes of propagation, and of repair to injury, and will find a marvellous similitude between the functions in the animal and vegetable kingdoms.

By the study of these two subjects you will have your minds led to a comprehension of the grand scheme of creation.

You will have forced upon you the glorious conception of a superior ruling power; you will behold with awe the mighty works of creation, and be led to a sense of gratitude that these beauties should be unfolded to your view. In the study of chemistry you will be able see the wondrous variations and complex changes that take place in the unorganized elements themselves, and be able to trace from the simplest element the changes to the most complex form of matter.

You will become familiar with the various imponderable agents which work such vast changes in the world, light, heat and electricity, themselves unseen and only making themselves known by their effects. The mystery of the thunderstorm, with its superstitious surroundings, and the arch of resplendent colour, promise of future pleasure, will be explained to you; and yet more, you will be able to trace the lifegiving principle of heat.

You will find all these studies systematized and ready to your hand to grasp, and by their systematic study you will be led gradually to put your own ideas into system and order, and be prepared for the engrafting upon that knowledge the greater and still more wonderful scion of knowledge the practical application thereof to the benefit of your fellow creatures, and the alleviation of their distress; and when after the laborious hours you shall have passed in your studentship and have arrived at what now appears to you the climax of your ambition, and gained the reward so far as your teachers are concerned, the degree to which you will be entitled and have commenced the practice of your noble calling, you will receive a share of your reward in the thanks bestowed on you by those who fall into your hands in the hour of their affliction.

Be punctual at your lectures, be earnest in your attention, labour to understand, inquire of your teachers on any

point which is difficult to you, and rest not satisfied till you have probed the difficulty to the bottom.

Take notes of all you hear; examine for yourselves, and take nothing for granted, but whenever possible verify for yourselves.

Think nothing too small or trivial for observation, it is by straws you can tell the currents of wind or of stream.

Make collections of facts, and therein be careful you are not deceived, for the facts you may record will some day be taken as such, and be systematized by others on your responsibility, and if you allow an error to creep in in your observations you will be so far responsible for errors occurring afterwards.

The whole domain of theory is dependent upon the truth of the facts from which the theory is deduced. In all matters scientific or otherwise we observe facts and record them; and by-and-bye when a sufficient number of experiences have been established, some master lays hold of all these facts, and thereupon deduces theories and laws, and hence the student of science is led to become a student of truth, and thence to try by every means to throw out error and superstition, which have so often and are still so often employed by the knave to prey upon the credulity of his fellow man.

Be careful in the study of practical anatomy and chemistry; by the one your hand will be educated to the necessary dexterity to perform an operation with comfort and success to yourselves, and the least discomfort to the sufferer; by the other your mind will be moulded to a systematic mode of analysis, by which you will be the better enabled to examine and decide upon a difficult case.

Your materia medica will teach you the derivation of the materials scattered with such profusion by a beneficent Providence; their uses, and mode of application, and will lead you through the sciences of Botany, Geology, and Chemistry. The application of these various branches will be thoroughly explained to you in your lectures, on the

theory and practice of medicine, surgery and midwifery, the institutes of medicine, and medical jurisprudence.

But gentlemen attendance at these lectures will not alone qualify you, you must apply these theories to the cases you find in the wards of the hospital; there it is by the bedside you must for yourselves apply the knowledge gained at your lectures or in your reading; there you must study those physical signs which enable you to distinguish health from disease, and one disease from another.

Note in the hospital wards the practice of your teachers, and verify your own observations and prognosis whenever opportunity occur by your attendance in the dead house, and compare the results there found with the facts observed during lifetime.

You will in the course of your studies have observed that some diseases are communicable, and that there are certain conditions which are best adapted to keep the body and mind in a healthy condition, and others which tend to depress the energies of the body and predispose it to disease.

These observations constitute the science of Hygiene. This science, the outgrowth of the labors of former observers has been elaborated and systematized till it forms a separate course of study, to which your special attention will be given with great advantage.

By attention to this science and the laws which regulate it, the death rate has been decreased from 40 to 17 per 1000 annually in well regulated cities.

The application of your knowledge in Medical Jurisprudence is the most exacting. It requires in you a more intimate acquaintance with all branches of your studies, often having to determine between poison and disease, between injury, accidental or intentional, even to the determining of the nature of the skeleton, and oft times requiring you to enter that most difficult of problems, the human mind, and to determine whether or no it was off the balance.

I would particularly urge on you the study of chemistry at this time, as there is a new law in operation, against the

adulteration of articles of food, and who should be so competent to determine whether an article is injurious to health or not as the physician ; furthermore there will be appointments to be obtained under the Government, and these will require men competent to undertake the work. Having toiled up the various rounds of the ladder till you reach the trial balance, and been weighed, and found good and true coin, you become graduates of this university or any other to whose honours you aspire.

You will have fulfilled the requirements of the law of your country, but let me trust that the insight you will have gained into the knowledge of your profession, will have ripened the early fancy of your first love into the mature, enduring, and earnest devotion of the wedded man.

You may now select your special object of study and pursue it to perfection, and by your assiduous performance of duties render yourselves qualified for selection as teachers, or add your names to the golden list of original discoverers for the admiration and emulation of succeeding generations of students.

Let your motto be

"Me doctarum hœdarœ premia frontium,
Dis miscent superis."

Introductory Remarks to, and Synopsis of, Practical Course on Institutes of Medicine. By WM. OSLER, M.D., Prof. Institutes of Medicine, McGill University.

If one characteristic more than another marks the medical education of the present day it is the desire to have, as far as possible, all the branches taught practically. The theoretical age in medicine is passing away, and is being rapidly replaced by a practical one. Already in large centres like London a revolution has been effected, due in great measure to the wisdom and foresight of the men controlling the great examining bodies, who now demand of all

students presenting themselves for degrees or diplomas, satisfactory evidence of a thorough practical acquaintance with every department of medicine and surgery. It is a well-known fact that the enormous percentage of rejections at the Primary examination for the M. R. C. S., (often 50 per cent.) results from failure in the practical part; and the same holds good at London University, where no degree of excellence in answering written questions will compensate for ignorance of the details of chemical and microscopical manipulation. This is as it should be, and though the reputation which the medical department of McGill University enjoys throughout the country has been obtained by the practical character of the teaching offered, much remains to be done. Progress must be our watchword, and we must endeavour to keep pace with the old country institutions by taking heed that the beneficial reforms effected in them quickly find a place with us. In this spirit the course you are about to begin has been inaugurated. An opportunity will henceforth be afforded to the students attending this School of becoming practically acquainted with the use of the microscope in physiology and pathology; and I may venture to congratulate McGill College as the first in this country to offer such a course, and in so doing to be the first to conform in all respects to the requirements of the College of Surgeons of England, which demand that such shall be provided.

The first essential in a course like this is a proper supply of good microscopes, every student must be furnished with one to enable him to follow out the demonstrations with any degreee of satisfaction. These have been obtained from Dr. Hartnack of Paris and Potsdam, and are the same as are in use in the chief laboratories of Europe. No microscope maker, British or foreign, has yet, (as far as my experience goes,) made up an instrument at all to be compared with compact, Hartnack's students' microscope. It is small and easily carried about, not burdened with stage movements, &c., and so not liable to get out of order. The

The object glasses are very superior, possessing a clearness of definition, and power of penetration excelled by few, if any, English lenses. Their uniform excellence is remarkable; of the dozens of lenses by this maker that I have examined, I have never met with an inferior one. An instrument with magnifying powers ranging from 65 to 500 diameters—capable of easily defining ordinary Bacteria—costs out here (including duty and carriage) about $45, a little more than would be paid for a single English object glass ($\frac{1}{8}$ inch) magnifying as much!

That you have a due appreciation of the value of the microscope as an important means of obtaining correct ideas on physiological and pathological subjects, your presence here to-day assures me. As practical Physicians a knowledge of its use will be most advantageous, and limited indeed must that practice be which does not afford some cases upon which the microscope would throw light. In no class of diseases is it of greater service than in the various Renal disorders. Here we may not only date the commencement of the affection, and follow it in its progress, but, also, very often obtain tolerably certain evidence of the nature of the changes going on in the kidneys. In the examination of vomit and alvine discharges the practitioner is able, if familiar with the use of the microscope to decide upon the nature and origin of substances, which, to the unaided vision, may appear very doubtful. I remember a case a few years ago, which occurred in the practice of a friend, of a man who had a fistulous opening in the right iliac region, which discharged a considerable quantity of stinking pus; occasionally a distinct fæcal odour was perceptible in the discharge, and the question arose as to a communication with the gut. After a careful search I found several portions of striped muscular fibre and vegetable tissue, proving that at some point a communication with the bowel must have existed. Satisfactory evidence can be obtained by it of the occurrence of softening in a lung, by a careful examination of the sputa, even before the physical signs give any such indication.

In Medico-Legal inquiries the general Practitioner derives most important aid from the microscope. Chemical analyses in poison cases are usually—and rightly—carried out by specialists, but every medical man should be able, in given specimens, to distinguish between blood stains and those of reddish fluids, between human hair and that of animals, and be able to pronounce an opinion on a supposed semen stain. In the diagnosis of tumours, another important use is found for this instrument; but here, as we shall learn, caution must be exercised. Except in well marked instances of Scirrhus and Epithelioma, few things are more difficult to decide by the microscope alone, whether a given tumour be a malignant or benign growth. Often it is quite impossible, and in all cases the general character of the tumour must be taken into consideration. The Physician is usually the sanitary authority of his district, and supposed to know diseased from healthy meat, which it is not always possible to do on external examination; and here again the microscope will do good service. These are briefly a few of the instances in which a knowledge of the use of this instrument will assist you in practice. I have purposely mentioned these few pathological instances of the use of the microscope first, for as practical physicians we must consider them of primary importance; but in addition you will find a genuine source of enjoyment and profit in following out almost any branch of Histological inquiry. We shall begin upon and work over the normal textures of the body, which will familiarize you with the details of manipulation, and without which it would be impossible to appreciate the pathological changes in the various organs. As in learning the use of any other instrument, so with the microscope, you must not expect to become proficient all at once. In the present course you will, at any rate, master the chief difficulties, and be able to pursue the study by yourselves, as well as prepare a set of specimens that may be useful for reference hereafter. Though the two hours devoted to the demonstration will

be sufficient to show you how to examine and prepare the tissues, yet I hope to be able to arrange for another hour in the week, when you can have access to the microscopes, and study your specimens. We shall try to carry out on each day the appointed work, but I expect you all to keep a sharp look out in the Hospital, and obtain any interesting specimens that are about. They do not always come to hand when wanted, and must be examined as we get them. Some of you, no doubt, will want microscopes of your own, and I am negotiating to get an agency established here for these instruments, whereby they can be supplied to the students at cost price, and I am in hopes of being able to obtain the sanction of the Government to pass them into the country free of duty for educational purposes. I trust the course to-day inaugurated contains the promise of better things to come; and I look forward to the time—not far distant I believe — when we shall have a well equipped Physiological Laboratory, in which students may not only obtain a practical knowledge of this important subject, but also, under the superintendence of a skilled assistant, be able to carry out and extend their physiological studies.

SYNOPSIS OF THE COURSE.

DEMONSTRATION I.—General description of the Microscope. How to clean it. How to tell its magnifying power. How to draw with it. Examination of dust, cotton fibres and air bubbles.

DEM. II.—Protoplasm. Amœba. Cyclosis in Anacharis. White blood corpuscles.

DEM. III.—Red blood corpuscles of Frog, Fish, Bird and Man. Hæmoglobin crystals from Rats' blood. Hæmin crystals. How to examine blood stains.

DEM IV.—Epithelium: squamous, cylindrical, glandular and ciliated.

DEM. V.—Connective tissues. Corpuscles. White fibrous and elastic tissues. Adipose tissue. Pigment.

DEM, VI.—Tendon, cartilage, bone and tooth.

DEM. VII —Muscle, voluntary and involuntary.

DEM. VIII.—Blood vessels. How to inject.

DEM. IX. Method of hardening tissues. How to cut sections. Liver.

DEM. X.—Lung.

DEM. XI.—Alimentary canal.

DEM. XII.—Kidney.
DEM. XIII.—Lymphatic vessels. Skin,
DEM. XIV.—Nerve, fibres, cells. Central organs.
DEM. XV.—Examination of sputum and vomit. Discharges from uterus and vagina.
DEM. XVI.—Pus. and tubercle
DEM. XVII.—Examination of urine. Casts.
DEM. XVIII.—Examination of urine. Inorganic deposits.
DEM. XIX.—Morbid growths. Cancer cells.
DEM. XX.—Parasites. Animal and vegetable

Case of Fractureof the Epiphysis of the Great Trochanter. Periostitis.—Pyæmia.—Death. By T. G. RODDICK, M.D. Professor of Clinical Surgery, McGill University, Attending Physician to the Montreal General Hospital.

On the 4th of July (Sunday) last, I was called to attend a lad, H. P., aged 16, living with his parents in St. Lawrence street, of this city. I found him lying in bed on the right side, and suffering very considerable pain in the lower part of the left thigh and knee, with an aching sensation over the gluteal region. I questioned both him and his mother as to the origin and history of his ailment, but could elicit nothing very definite beyond the following: It appears he had been limping about for three or four days in the previous week, complaining of soreness in the limb, but which was attributed to an ill-fitting boot he insisted on wearing. However, on Thursdsy, while standing at the desk in the office in which he was engaged, he was suddenly seized with an excruciating pain in the left hip, so great and persistent indeed that he had to be taken home in a cab, and placed in bed. After a few hour's rest he became much relieved, and on the following day he limped about the house with comparative comfort. On the Saturday, however, he could not get about without assistance, and next day (Sunday) I was sent for. He had always been an exceedingly active lad, out-stripping the majority of his comrades in the ordinary athletic exercises of running, jumping, &c., and on or about the day his lameness became noticeable, he

has an indistinct recollection of spraining or twisting the affected limb while hurriedly leaping a fence in pursuit of a ball. He limped through the remainder of the game, but next day thought little of the accident, attributing the stiffness in the limb to the tight-fitting shoe already spoken of.

Although there was little or nothing in the history above related to draw my attention in any particular direction, I examined carefully the affected limb but failed to find anything to account for the symptoms of which the patient complained. There was no special pain complained of on pressure over the region of the hip-joint, nor indeed in any other part of the limb, so I was disposed to look on the case as being neuralgic in character, and accordingly administered a hypodermic injection of morphia, with instructions to foment the thigh with hot water and give a dose of senna. I might mention that the patient's bed was very much exposed to draught from a window, which I thought might have had something to do as a cause, and ordered him to a larger and better arranged room.

July 5th.—I found that he was much relieved by the hypodermic injection, and had passed a comparatively comfortable night. I examined the limb again to-day most completely, but with a negative result as far as any injury to the bone was concerned. There was, however, some pain on pressure, and slight swelling over the outer side and front of thigh, and on moving the limb the pain was decidedly greater in the neighborhood of the hip than before. The presence of swelling with pain on deep pressure led me already to suspect periosteal inflammation. There was also now marked constitutional disturbance as evidenced by the coated tongue, rapid pulse, 110, and slight headache. My attention was directed to-day to a swelling of the parotids, especially of the left side, which had been noticed only since my visit yesterday. There was also slight pain in the the right ankle and great toe, with a small patch of redness over each, but no swelling in either that I could make out. I looked upon these as symptoms of grave import. I order-

ed hot poultices to the entire thigh, and internally powders containing five grains of Dover's powder, and half a grain of Calomel every 4 hours.

July 6.—Pulse 116 ; temperature 101½.—Had a slight rigor during the night, the first since his illness, and to-day looked very haggard, although the sides of the face were even worse swollen from the parotid inflammation than yesterday ; the pain in the ankle and toe were worse and the redness was more extensive. The swelling in the thigh was more marked, and although I could not make up my mind that there was fluctuation, I decided on giving him the benefit of the doubt, and accordingly plunged my exploring trocar into the thigh striking the femur on the outer side, and about the junction of its upper and middle third. A quantity of unhealthy-looking sanious pus flowed through the canula, thus verifying the diagnosis at least in one particnlar. I now gave the patient chloroform, and followed the exploratory puncture with a long and deep incision, down to and through the periosteum. This was followed by an enormous quantity—probably half a pint—of the variety of pus above described. I plugged the wound to the bottom with oiled lint, and ordered poultices of linseed meal. I prescribed also a grain of quinine, twenty minims of the tincture of iron, and five grains of the chlorate of potash in mixture every four hours, together with beef tea, milk, and wine ad libitum.

July 7.—Was very comfortable after the operation and slept well. Pulse 120 ; temp. 102.—Tongue inclined to be dry in centre ; has had two stools rather relaxed in character. I injected the wound thoroughly with a weak corbolic solution as the dicharge continues to be very profuse and fetid. I examined the bone with my finger passed through the wound and was surprised to find a large surfaee of bare bone extending upwards towards the neck of the femur. A considerable quantity of the injection would be also retained, showiug that a large cavity existed around the bone. A remarkable feature in the case however is the fact, that

almost coincident with the removal of the pus by the incision the parotid enlargement and pains in the joints of the great toe and ankle began to subside, so that by the time I returned, in twenty-four hours, the face had almost resumed its original appearance, and the patient could move the affected joints.

July 8th.—The parotid swelling has entirely disappeared and the ankle and great toe can be moved as well as ever. The pulse to-day is 124, and small in volume; temperature 100¾; had a quarter of a grain of morphia during the night which gave him a refreshing sleep. The discharge from the thigh continues to be large in quantity, and of a most offensive odour. I repeated the carbolic injection and was again surprised at the quantity retained.

July 11.—The condition of the patient during the past two days has been slowly but surely growing more unfavorble. The pulse has ranged from 120 to 130, and the temperature from 101½ to 103 at night. The discharge contiuues to be if anything more profuse and disagreeable, and the patient's strength is rapidly running down.

At my suggeetion, my friend Dr. Fenwick, met me in consultation this afternoon, and after a careful examination of the case agreed with me in the diagnosis and course of treatment adopted, but suggested in addition the introduction of a drainage tube. I proceeded immediately, under chloroform, to make a counter-opening about four inches higher than the original one, and while in the act of passing my finger down to meet the probe bearing the tube I came across a fragment of bone, drawn far away from the shaft of the femur, and which on more careful examination we found to be the *epiphysis of the trochanter major*. As it was held firmly by the muscles inserted into it, and was evidently at that time doing no material harm, we decided on leaving it. The drainage tube was introduced and subsequently did good service in carrying off the rapidly accumulating blood and pus.

July 14.—Has been rapidly growing worse during the

past two days. The pulse is now 140 and thready; temperature 99½. There is a tendency to diarrhæa, although not to any serious extent. To-day he notices that he cannot move his left arm without the assistance of the other, although he has perfect sensation in it, and the pulse of that side is equal in volume with the opposite. When raised it falls heavily and in any position desired, showing an absolute want of power. He is free from pain in any place excepting the injured limb and then only when disturbed. I am still

continuing on with the same treatment, both locally and internally, with the addition of a little brandy and champagne, occasionally.

July 16.—Dr. Fenwick saw him with me again to-day, but could suggest nothing beyond what was being done. He is evidently gradually sinking.

July 17th.—Died this morning; no change in the general symptoms having previously occurred.

Autopsy.—Thirty-two hours after death, assisted by Dr. Cameron, I cut down upon and removed a large portion of the diseased femur, with the unattached epiphysis of the trochanter major. We found the periosteum separated from

the bone down nearly to the junction of the lower with the middle third, consequently for that distance the femur simply lay in the centre of an immense abcess, the lining membrane of which corresponded to the periosteum. The detached epiphysis was by this time almost completely denuded of periosteum, so that it could be removed from its muscular attachments with little difficulty. Owing to the opposition of friends the examination was not further continued.

Remarks.—The above case is almost unique in kind and occurrence, for we are told by Prof. Hamilton, in his admirable work on Fractures and Dislocations, that so far as he knows there is only one "well authenticated example" of fracture of the epiphysis of the great trochanter on record, viz., a case reported by Mr. Key to Sir Astley Cooper. To quote from Prof. Hamilton, "the subject of this case was a girl aged about sixteen years, who fell (March 15, 1822) upon the side-walk, and struck her trochanter violently against the curb-stone. She arose, and without much pain or difficulty walked home. On the 20th she was received into Guy's Hospital, and the limb was examined by Mr. Key. The right leg, which was the one injured, was considerably everted, and appeared to be about half an inch longer than the sound limb. It could be moved in all directions, but abduction gave her considerable pain. She had perfect command over all the muscles, except the rotators inwards. No crepitus could be detected. Four days after admission she died, having succumbed to the irritative fever which followed the injury. The autopsy disclosed a fracture through the base of the trochanter major, but without laceration of the tendinous expansions which cover the outside of this process, so that no displacment of the epiphysis had occurred, nor could it be moved except to a small extent upwards and downwards. A considerable collection of pus was found also below and in front of the trochanter. The absence of displacement in the fragment, with its peculiar and limited motion,

sufficiently explained why the fracture could not be detected during life."

The cause of the accident in my case is still to some extent a mystery. Could the fracture have occurred from muscular action on the occasion described, when the lad leaped or threw himself from the fence in pursuit of his ball? I have thought this not improbable, and the process being firmly held by the tendinous expansions covering it, allowed of his walking with comparative ease for several days, until these suddenly giving way, either from ulceration or periosteal effusion, produced the agonising pain and instant lameness described as occurring while standing at his desk.

Although there was at the time an absence of all history of injury to the bone, I examined the limb most carefully on the occasion of my second visit, but failed to discover any of the ordinary symptoms of fracture in that locality, such as crepitus, inversion, eversion, &c. There was neither shortening nor lengthening of the limb, for after the consultation with Dr. Fenwick, or, if I mistake not, in his presence, I measured most accurately without discovering either of these signs. The absence of crepitus is readily understood when we consider that early in the accident the fractured epiphysis was no doubt bound down firmly by the tendinous expansions, (which it will be remembered was the cause of absence of crepitus in Mr. Key's case,) while later on the effusion of serum and blood which followed, would effectually separate the fractured surfaces and obscure this sign.

The other points of interest in the case were the unmistakeable signs of blood contamination, as evidenced in the enlarged parotids and painful joints, which, however disappeared with remarkable rapidity as soon as the periosteum was opened and the pent up pus dislodged. It is more than likely that had the incision been delayed many hours longer, the pyæmic symptoms would have made such headway as to have got beyond all control, and life would have

been destroyed much more rapidly than was ultimately the case. The paralysis of the left arm, which occurred on or about the tenth day of my attendance was as complete as that which occurs from fracture of the spine or other cause of pressure on the cord, entirely destroying its function. Motion, however, in the opposite arm and leg was unimpaired, so that it is not easily explained on the supposition of local effusion, as both sides, and in fact every part below that would have participated in the paralysis. There is no doubt but by the time this symptom appeared all power was lost in the fractured limb, which was also the left, but this I attributed to the extensive disease going on in the thigh, although I have since thought that the same cause, such, for instance as a pyæmic abscess in the brain, might have produced loss of power in both arm and leg.

Periscopic Department.

SURGERY.

A Case of Total Extirpation of the Larynx with the Hyoid Bone, and a portion of the Tongue, Pharnyx and Œsophagus. By B. Von Langenbeck, Prof. in the University of Berlin.

Gentlemen,—The preparation which I beg to lay before you is worthy of attention on account of the unusual extent to which the cancerous degeneration has reached in the larynx and beyond it. It was necessary on this account to remove the whole larynx with the epiglottis, the hyoid bone, and the posterior third of the tongue, as well as the anterior and lateral portion of the pharynx with the pharyngo-palatine arch, and a small part of the œsophagus. I will give first a brief statement of the history of the disease.

A master smith named Krause, of Brandenburg, aged

fifty-seven, was admitted into the hospital on November 29, 1874, with violent dyspnœa, threatening suffocation, attacks of cough attended with a whistling sound, and a cyanotic tint of the face. It was impossible to obtain the anamnestic circumstances of the disease from the patient himself; and we only learned that he had been a healthy and strong man up to about four years previously, when he suffered from hoarseness and difficulty of breathing, and for some time he had been treated in Berlin by cauterisation of the larynx. Laryngoscopic examination, which was very much impeded by the difficult respiration, showed, ulceration at the anterior commissure of the vocal cords and a defect of the arytenoid cartilage. The evening temperature was 38·2 Cent. (100·76 Fahr.) On November 30 tracheotomy was performed, under chlorofrom. The upper rings of the trachea were ossified, and were divided with difficulty; and after the trachea had been opened, the introduction of the cannula was hindered by incessant and long-continued paroxysms of cough. By these, a quantity of thin purulent sputa was expectorated and he was considerably relieved. Some infusion of ipecacuanha, with morphia, was given. The tormenting paroxysms of cough with abundant expectoration of purulent sputa and acute fever, continued until December 10. The fever then ceased, the sputa became mucous, and the operation wound healed leaving at the end of December only the fistula in which the cannula lay.

An examination made at this time revealed distinct enlargement of the larynx, and tenderness on pressure. The lymphatic glands in the right inframaxillary region, were swollen. Nothing abnormal could be detected on inspection of the mouth and fauces; with the finger, the epiglottis was felt to be swollen. The laryngoscope showed remarkable œdematous swelling of the epiglottis and of the ary-epiglottic ligaments, so great that it was impossible to obtain a view of the cavity of the larynx and of the rima glottidis.

Extirpation of the larynx was urgently recommended at this time; but the patient refused to submit to the operation, and left the hospital on January 11, 1875.

On July 1, Krause was re-admitted. Breathing had been carried on with perfect freedom through the tracheal tube; but lately there had been increasing difficulty of deglutition, so that the patient was now only able to take fluid food. The larynx, so far as could be ascertained by palpation, was swollen, widened, without distinct outline and hard. On both sides of the neck, infiltrated inframaxillary glands could be felt.

On pressing down the tongue, a yellowish red nodulated mass was seen to project behind the root, which we were inclined to regard as the diseased epiglottis. Laryngoscopic examination was impossible, in consequence of the masses of mucus which filled the pharynx and completely closed the upper opening of the larynx. In this region the finger felt a ragged nodulated swelling, which prevented the finger from penetrating further into the pharynx. The patient's general condition and strength were satisfactory.

Extirpation of the larynx was performed on July the 21. The patient having been narcotised by chloroform administered through the trachea was enlarged downwards, and Trendelenburg's tamponcannula was introduced and fixed into the trachea by pumping air into the India-rubber bag. Anæsthesia was kept up to the end of the operation by administering chloroform through a tube introduced into the cannula.

I performed the operation in the same way as I had devised in 1854 in a similar case, in which however, operative procedure was finally abandoned.

A transverse incision was made two centimetres (0·8 inch) above the hyoid bone, from the inner edge of one sterno-mastoid muscle to that of the other. From the centre of this incision another was carried in the middle line, over the larynx, close down to the tracheal fistula, the upper cicatrix of which, however, was not divided. The skin was

then turned back in two flaps, and the larynx (thyroid cartilage) was laid free. The infiltrated lymphatic glands, with the right submaxillary gland, were then extirpated ; the mylo-hyoid, digastric, and hyo-glossus muscles were cut through above the hyoid bone, the lingual artery was exposed and tied ; the glands were then removed on the left side, and the lingual artery was tied. The operation was considerably impeded by the unusual shortness of the patient's neck by the fusion of the soft parts with the larynx, probably induced by the long retention of the cannula. The stripping off of the soft parts from the thyroid and cricoid cartilages could only be imperfectly accomplished ; and the intention of dissecting off the pharynx and the upper end of the œsophagus from the larynx had to be abandoned, as the cancer had invaded the first-named of these parts.

It being then impossible to preserve the anterior wall of the pharynx and œsophagus, we proceeded to lay open the fauces. The larynx being drawn forward and downwards by a sharp hook fixed in the hyoid bone, the point of the tongue was drawn out of the mouth by means of a thread passed through it, and the root of the tongue was cut through about four-fifths of an inch above the hyoid bone. The superior thyroid arteries were then tied, and the lateral wall of the pharynx cut through. Finally the pharyngo-palatine arches, which were stretched forward by the strong dragging of the larynx, were divided. The external carotid artery, which was drawn forward with the lateral wall of the pharynx was then laid bare on each side, tied in two places, and cut through between the ligatures. The lingual and hypoglossal nerves were also exposed and divided.

The larynx now remained connected only with the trachea ; and the latter was divided close blow the cricoid cartilage, so as to leave the tamponcannula in the tracheal fistula.

The anterior cervical region from the chin nearly as far as the manubrium sterni, showed now a large opening at the

bottom of which the spinal column, covered by the posterior wall of the pharynx and œsophagus, lay exposed. The skin of the neck, which had been divided by the transverse incision, was turned over in two flaps like a collar. The trachea sank downwards, so that the cannula lay close above the sternum. At the end of the wound were seen the velum palati and the broad wounded surface of the tongue. On inspection through the mouth, the anterior part of the tongue was seen to be quite pale ; it had receded from the lower jaw, and was completely immovable.

The muscles divided and removed in the operation, besides the small laryngeal muscles, were the sterno-hyoid, sterno-thyoid, crico-hyroid, and mylo-hyoid, digastric, genio-hyoid, stylo-hyoid, and stylo-glossal ; the stylo-pharyngei, glosso-pharyngei. and palato-pharyngei. Forty-one ligatures were applied to vessels, viz., to the external maxillary, lingual, superior thyroid, external carotid, and laryngeal arteries ; and both hypoglossal and lingual nerves were divided. Along with the infiltrated lymphatic glands I had removed both submaxillary glands, feeling that these glands, which were apparently somewhat enlarged, might become diseased.

Notwithstanding the extent of the wound and the length of the operation, which lasted two hours, there was comparatively little exhaustion. The patient's appearance was good : pulse 80, full and strong ; temperature 36·8° Cent. (98·25° Fahr.). I belive that this is mainly to be ascribed to the circumstances that complete chloroform-narcosis was steadily kept up by the help of the plug in the trachea from the beginning to end of the operation ; that we were able to completely prevent the flow of blood into the air-passages ; and that, the operation being performed by careful anatomical dissection without any bruising or laceration of the parts, we were able to tie the great vessels before dividing them.

After the operation was completed, and the patient had awakened from the anæsthesia, some Hungarian wine was

given to him through an œsophageal tube, the tampon-cannula was removed and an ordinary strong tracheal cannula substituted. In order to prevent the mucus which was abundantly secreted by the remaining part of the fauces, from coming into contact with the cannula, a compress soaked in a solution (one-third per cent.) of salicylic acid was placed round the neck so as to cover the wound. I abstained from attempting to unite the wound in the cervical integuments by sutures, fearing that the stretching of the parts would favour the burrowing of the secretions from the wound between the divided cervical fasciæ. The flaps of skin on the two sides of the neck were therefore simply laid down in place, and supported by the above-mentioned salicylised compress.

July 22. The patient had vomited twice since the preceding evening (after effect of the chloroform) ; in other respects his condition was good. Pulse, full and strong, 80 ; temperature, morning 38·6° Cent. (101·48° Fahr) ; evening, 39·8° Cent. (103·64° Fahr.). He was fed three times daily through the œsophageal tube, and had nine eggs, milk, soup, and about a pint of Hungarian wine in the day.

July 23. There was abundant expectoration of thin mucus through the cannula. Temperature, morning, 38·6° Cent. (101·48° Fahr.) ; evening, 39·4° Cent. (102·92° Fahr.) ; pulse, 80.

July 25. The patient passed a good night. Since the preceding day there had been diarrhæa, for which fifteen drops of tincture of opium were ordered. The temperature and pulse were as on the 23rd. On account of fœtor, the cavity of the mouth was several times washed out with salicylised water. By means of a large sponge, which was pressed above the cannula against the posterior wall of the pharynx, overflow into the trachea was prevented, and the mouth and fauces were carefully wiped with a solution of salicylic and boracic acid.

July 26. There was still abundant purulent secretion ; but respiration was perfectly free and quiet. Pulse full,

strong, regular. Evening temperature, 38·2° Cent. (100·76° Fahr.).

July 28. The patient's general condition remained good; he was free from fever.

In the preparation, the anterior wall of the œsophagus and pharynx is cut through, larynx is cut away from behind, and the hyoid bone sawn through in the middle. The cancerous degeneration has so complelely involved the upper division of the larynx. the epiglottis, and hyoid bone, that it is difficult to recognise the individual parts. The inner surfaces of the cricoid and thyroid cartilages, as far as the laryngeal pouches and the inferior vocal cords, are free. The morbid change begins close above the laryngeal pouches, and in the form of nodulated masses, completely fills the whole upper part of the laryngeal cavity. The arytenoid cartilages and the ary-epiglottic ligaments are completely lost in the tumour. The epiglottis is recognisable in a somewhat separate mass, in which some fragments of the œsophagus can still be recognised. The hyoid bone is surrounded by the swelling, which was growing upwards into the base of the tongue.

The anterior surface of the hyoid cartilage and the ring of the cricoid cartilages have remained quite free from disease. The tongue is divided in front of the papillæ circumvallatæ, and the cut surface shows healthy tissue. The removed larynx, hyoid bone, and tongue are about 4·4 inches long, of which 1·2 inches belong to the tongue.

You are aware, gentlemen, that after Czerny had demonstrated by experiments on dogs the possibility of extirpating the larynx (*Wiener Medizinische Woehenschrift*, nos. 27 and 28, 1870), the first extirpation of the larynx in man was performed by Billroth. On December 31, 1873, he removed the larynx from a schoolmaster, aged thirty-six, on account of diffuse epithelial cancer, A part of the two upper tracheal bags, and the whole of the cricoid, arytenoid and thyroid cartilages were removed, and a third of the base of the gullet was taken away. The œsophagus and pharynx,

the anterior and greater part of the epiglottis, and the hyoid bone, were preserved. The patient was dismissed cured on March 2, 1874, able to speak intelligibly by means of an artificial larynx (Dr. C Gussenbauer, in *Archiv für Klinische Chirurgie*, Band xvii. 1874).

The second operation, for partial extirpation, was performed by Heine, of Prague, in a case of stenosis of the larynx. How much of the larynx was removed I do not know; and regard to this I must refer you to the forthcoming transactions of the fourth German Surgical Congress, held in April of the present year, at which the patient operated on by Heine was shown.

A third operation of this kind performed on August 12, 1874, by Dr. Moritz Schmidt, of Frankforr, who removed the cricoid, thyroid, and arytenoid cartliages from a cattle-dealer, aged, fifty-six, on account of carcinoma of the larynx, producing narrowing and symptoms of suffocation. The patient died of collapse on the fifth day after the operation.

With regard to the steps of the operation, I must inform you that Billroth and Schmidt made a longitudinal incision upwards from the hyoid bone, and removed the larynx by cuttingh throug the trachea from below; while I made a T-shaped incision, freed the larynx from its connection above by careful dissection, and divided the trachea last of all. I would recommed my method also in cases where the larynx alone is to be removed, and the epiglottis, hyoid bone, and tongue, are to be preserved. By performing extirpation from above, it becomes possible to expose and tie the principal arteries before dividing them, so as to reduce the loss of blood to a minimum and prevent the escape of blood into the trachea, even when one operates without plugging the trachea, or when the plug is spoiled. I must however, attach the greatest importance to the plugging of the trachea; and it is advisable always to have at hand several of Trendelenburg's tamponcannulæ in case that one or other of them should fail.

In order to be able to carry out the plugging as quickly

as possible, it is advisable to perform the tracheotomy before proceeding to extirpate the larynx. Indeed, in most cases it will be possible to wait for the cicatrisation of the tracheal fistula before proceeding to the principal operation. The advantage is gained by this, that the trachea, being united to the skin in the region of the fistula, does no sink downwards as is otherwise the case, and that the process of stitching the skin of the neck to the trachea may be omitted.

In the cases operated on by Heine and Billroth, an artificial larynx was fitted on soon after the operation. In my patient, the large traumatic cavity, extended far beyond the limit of the larynx, will render this impossible, and it will be necessary to wait for the cicatrisation of the wound. How this will take place if the case continue to make favourable progress, and whether in the perfectly immovable state of the remnant of the tongue, the power of swallowing may return, I am not able to foresee.—*London Medical Record.*

The Case of the late Prof. J. Hughes Bennett. By W. CADGE, F. R. C. P., Surgeon to the Norfolk and Norwich Hospital.

Professor J. Hughes Bennett died at Norwich on Sept 25th, 1875, aged 63.

A narrative of his illness, so far as it is known to me, particularly of the last complication which led to his death, will have a sad interest for those who knew and loved him as a friend or teacher; and a deep professional, as well as a sad, interest for those, and they have been many, who from time to time, have used their best skill and thought to detect and unfold the hidden cause of his mysterious case. I know not exactly when or how Dr. Bennett's first failure of health commenced; but it was many years ago. The most prominent and persistent of his early symptoms were those of a bronchitic and laryngeal affection, which were sometimes urgently alarming, sometimes almost recovered from, were readily reproduced, and did frequently recur up to the very last.

By slow degrees, his general health failed, he grew thinner, looked paler and lost strength. A few years ago it was discovered that he had diabetes ; but this disappeared without any great rigor of treatment, and has not been thought or known to have recurred, except occasionally and very slightly. On this point, however, there may be room for doubt. Since the first discovery and the first disappearance of the sugar, I have reason to believe that examinations of the urine have not been frequently made. In conversations and in answer to questions on this subject Dr. Bennett always spoke of the diabetes as a thing of the past, and as not bearing with importance, or as having much influence, on his steady deterioration of health ; at no time had he thirst or diuresis ; and, therefore the malady did not impress itself on his thoughts by the usual general symptoms. Very recently, however, (in August) sugar was again found ; and I have before me a paper containing observations on the urine made three times daily during the first half of September, 1875 ; from which it is shown that while the specific gravity and the quantity of the urine were but little, if at all, above the natural standard, sugar appeared and disappeared in a quite irregular and intermitting way, thus the urine passed during the night gave a dense deposit, with Pehling's test on five out of fourteen days ; that passed at mid-day on six, and that passed in the evening on four out of fourteen days ; while in all the other observations, no sugar was found. During this period his diet was very similar from day to day ; consisting of fish, a little meat, pudding or tart, fruit and sherry ; very little bread and no potatoes.

If, as I have said, in this long interval between the first and last clear recognition of diabetes, the urine was but seldom examined, and when examined, chanced to be free from sugar, it seems probable that glycosuria, in one of its intermittent and milder forms, existed throughout, and was the true and chief cause of the emaciation and debility which in any other hypothesis, it has been found so diffieult to explain.

Be that as it may, his health continued to decline. The last three winters he passed in the south of France, with some benefit, possibly, to his bronchial and laryngeal affection, but apparently without any effect on his general state. For many years. Dr. Bennett had suffered from occasional attacks of gout ; and he was liable, too, to lithic acid deposit in his urine ; occasionally for several years, he had experienced some slight impediment and irritation in making water, which he thought to be due either to slight stricture or to prostatic enlargement. From time to time, a simple catheter was passed, but no stricture was discovered. Last winter at Nice, he had rather more vesical irritation than usual. On his way to England, in June, he stayed for a time on the borders of the Lake Geneva ; and a letter received from him on July 1st will best describe his condition.

"I have long been intending to write to you in consequence of a malady which has been creeping upon me for some years, but which now is causing me no sma ll anxiety Frequent micturition ; pain in the back, long thought to be lumbago, but which I now know to be renal ; sediments of uric acid, and attacks of acute gout in the right foot, and one in the stomach, have indicated during the last, say four years, pretty clearly the general diathesis and approaching local disorder. About three months ago, at Nice, I was suddenly seized with pain during micturition, extending to the extremity of the urethra, and passed about a tablespoonful of bloody urine, mixed with gravel. The bladder was irritable for about twelve hours. Lying in bed, poultices, and some alkaline water, got rid of it. Since coming here, four weeks ago, I have been sensible of dull pain in the perinæum ; had two more attacks of irritable bladder, passage of blood, etc. Whether all this signifies irritable bladder, prostatic or renal disease, or stone, I cannot tell. Can you suggest what should be done ? I have given up wine, beer, acids, fruit and sugar ; take a good deal of milk, little meat ; indeed, the desire for animal food is small. I continue pale, weak, and emaciated ; I apply poultiees to relieve local pian,

and take about twenty grains of bicarbonate of potash thrice daily, in the slightly alkaline waters of this place ; I also take fifteen drops of vin. sem. colch. every other night or so. It may be only gout, but I dread stone. My urethra is very irritable ; and the last time a catheter was passed I nearly fainted. This was two years ago ; and I was then assured that there was no stricture or prostatic disease, merely a weak bladder."

In July, he came to Norwich, looking more emaciated, pale, and ill than I had ever seen him. On carefully sounding, a stone was readily felt, apparently of some size ; the bladder was capacious and healthy, and could retain nearly half a pint of urine ; the prostate was slightly enlarged ; the, urethra very sensitive and irritable ; the urine was clear acid, specific gravity 1,020, and contained no albumen. He was much depressed by the knowledge that he had stone, but his innate force of character came to his aid ; he looked the difficulty in the face, and was prepared at once to undergo treatment. It was not without difficulty that I induced him to go to Edinburgh in the first week of August ; there were many reasons which made a visit there desirable, travelling did not add much to his troubles ; and I confess that I was not without the hope, that once there, he would be persuaded to ask, and would see the wisdom of accepting the aid of one of his distinguished colleagues and friends. While there, he received much comforting and valuable encouragement, but his symptoms increased in severity. He wrote on August 18th : " There is now much more irritation than when I last saw you ; stooping and turning cause sharp pangs, and the close of micturition is very torturing." He returned to Norwich ; and the question of operation, lithotomy, or lithotrity, presented itself. Either must be attended with the greatest hazzard in one so worn and unhealthy ; but the thought of doing without operation was simply intolerable, and not to be considered. In favor of lithotrity, were the fair quietude and healthy condition of the bladder and urine ; but there were serious drawbacks. Dr.

Bennett was a man of high spirit and courage; but his courage fitted him rather to encounter one great risk than to endure the wear and tear of repeated operation, frequent use of instruments, and the probability (made more probable by the presence of glycosuria) of troublesome cystitis; the size of the stone alone could decide the point, and to ascertain this, Mr. Clover kindly came down and administered nitrous oxide, followed by ether; while, with the lithotrite I found that the stone measured 1½ inches by 1 inch. Such a stone as this was fairly within the compass of lithotrity in an otherwise favorable patient; but in this case I had not a moment's doubt, that lithotomy, if carefully and accurately done, notwithstanding its greater immediate risk, afforded the best chance of complete recovery. In this view the patient readily acquiesced; and on the following day, September 16th, I removed the stone by lateral lithotomy, assisted by Mr. Crosse, Dr. Beverley, and Mr. Hooker. The nitrous oxide and ether was again used by Mr. Clover, with admirable effect; there was never a movement of the patient, nor the least headache or sickness afterwards. The operation was easy and satisfactory. The transverse artery of the perinæum was large, and spurted freely; it was easily tied when the stone was removed; the blood was so thin, and so little disposed to coagulate, that every little vessel continued to ooze; and I deemed it best to plug the wound round a silver tube, rather than allow any quantity of blood to be lost. The stone was composed of lithic acid; it measured 1½ by 1 inch, and weighed 193 grains. No more blood was lost, and urine passed freely afterwards. He suffered considerable aching pain in the wound for some hours; but it was gradually checked by half a grain of morphia introduced into the rectum at thh time of operation, and twenty drops of Battley by the mouth two hours after. At night he turned cautiously on one side, took twenty grains of chloral, and had some hours' sleep. Pulse 90.

September 17th. Urine plentiful; he had pain only when

he moved. Pulse 96; temperature 102 deg. Tongue dry but clean. He had taken egg and milk and a few teaspoonfuls of brandy in soda-water; he had frequent cough and expectoration, which caused temporary pain in the wound.

September 18th. The tube and part of the plug was removed; after which the bladder was able to retain urine and empty itself by the wound every two hours. This caused considerable pain in the parts from smarting and spasm; but in a day or two when all the lint was removed, it abated, but never wholly ceased. Pulse 92; temperature 101 deg.

I need not record minutely the daily progress of the case. Suffice it to say, that for four or five days there was a good prospect of speedy recovery; he took food plentifully, and was in good spirits; and everything went on well so far as concerned the pelvis and bladder; the urine was easily caught and was clear, but loaded with sugar, with a specific gravity of 1030 to 1035. By degrees, however, the cough and expectoration became more frequent; and this, with the frequent spasm and larger amount of water secreted distressed him and prevented sleep. Opiates by the mouth or bowel relieved for the time, but were apt to be followed by sickness; chloral did not act well, and signs of increasdebility showed themselves. The pulse continued from 90 to 96, but became weaker and weaker. Aphthous patches gathered on the tongue and throat, and made swallowing difficult, and thus the prostration went on; and death from sheer exhaustion took place on the 25th, the tenth day after the operation.

Post mortem examination, forty-eight hours after death The body was emaciated; the surface pale and bloodless The blood was thin, and transuded through the vessels and stained the tissues. Only one small clot in the right ventricle of the heart was met with.—The *bladder* was perfectly healthy; its muscular walls were rather thin and dilated; its mucous membrane was pale and smooth.—The *prostate land* was enlarged to the size of a small apple; it projected

somewhat like a cornice into the bladder, and on this projecting part there were traces of slight ecchymosis beneath the mucous membrane. The lithotomy wound was clean and so slight, that looking from the bladder, none could be seen, and on closer scrutiny it was found that the knife had only divided the mucous membrane and had scarcely reached the left lobe—this, doubtless, explains the power of the bladder to retain urine the moment after the tube was removed.—The *kidneys* were slightly congested, but not unhealthy. — The *liver* weighed 4 lbs. 5 oz., and was healthy.—The *spleen* was greatly hypertrophied, and weighed 2 lbs. 12 oz. ; texture firm, of natural color and appearance.—The *stomach* and *intestines* were healthy.—The *heart* was large and flabby, and weighed 1 lb. 1 oz. ; its valves were healthy ; the left ventricle was empty ; the right contained a soft clot; the aorta was deeply stained by the colouring matter of the blood ; its walls were atheromatous, and there were several calcareous scales.—The *lungs* were emphysematous and œdematous ; there was some dilatation of the small bronchi; at the apices there were some small patches of collapsed lung-tissue ; no tubercle ; the right lung weighed 1¾ lbs. ; the left, 1½ lbs. There were some old pleural adhesions on the right side.—The *trachea* and *larynx* were pale and healthy.—*Head.* On raising the calvarium, a soft tumour was discovered situated on the right side of the head, about an inch above the ear, between the dura mater and the bone. It was about the size of a hen's egg, and projected towards the brain, so as to produce a deep pit or hollow into which it fitted. The convolutions were flattened and pressed down, but not otherwise altered ; no softening ; no congestion. The dura mater covering the tumour was somewhat thickened. The parietal bone was thickened and hypertrophied around the circumference of the tumour ; over it there was thinning by pressure and absorption, and at one point, about the size of a shilling, all trace of bone had disappeared, and it was replaced by fibrous membrane. The tumour had a cystoid character,

with a distinct investing membrane, and its contents consisted of a blackish pulpy material resembling the interior of a recent aneurism, or more closely of a myeloid tumour. Under the microscope, there were seen cells of various descriptions, plates of cholesterine, fatty granules, and altered blood-corpuscles.—The *brain* itself was anæmic, but not, on the whole, unhealthy; it weighed 47 oz. The optic thalami, corpora striata, pons Varolii, and medulla oblongata had a somewhat shrunken atrophied appearance, and were, perhaps, harder and tougher than usual. The arteries were healthy, and, to the naked eye, the texture of the brain around them seemed natural. I will make no comment further than to say, that so far as I have been able to ascertain, Dr. Bennett never suffered from headache, giddiness, or any symptom directly indicative of such a lesion as that just described.

I may add, that Professor Sanders of Edinburgh, who happened to be staying in Norwich, visited Dr. Bennett a day or two before he died, and was present and kindly assisted at the *post mortem* examination.—*British Medical Journal.*

MEDICO-CHIRURGICAL SOCIETY OF MONTREAL.

The annual meeting of the Medico-Chirurgical Society was held on Friday evening last in the Library of the Natural History Society. The President, Dr. Reddy, read an address giving a *resume* of the proceedings for the past year. A special vote of thanks was accorded to Dr. Roddick, the retiring Secretary-Treasurer, for the able and indefatigable manner in which he had filled the office since 1870. The following gentlemen were then elected officers for the ensuing year:—Dr. Godfrey, President; Dr. F. W. Campbell and Dr. Drake, Vice-Presidents; Dr. Roddick, Dr. Osler and Dr. Gardner, Council; Dr. Bell, Secretary-Treasurer.

CANADA

Medical and Surgical Journal.

MONTREAL, NOVEMBER, 1875.

MEDICAL AMENDMENT BILL.

We lay before our readers the bill which is proposed to be introduce, before the Local Legislature of this Province of Quebec, with a view to its becoming the Law, in substitution of the act of 1847, under which the profession is at present governed. How far this bill is an improvement on the old act, remains to be seen. The act of 1847 admits of improvement, but we do not think that this bill in any way fulfills that desired end. In matters medical, we deem it advisable to avoid as much as possible all hasty Legislation. We have an act which is efficient, and under which the profession has prospered for nearly thirty years, and although not wedded to the present act, believing as we do that it can be much improved upon, yet to force on the profession a change without due and careful consideration, and without fully submitting the various provisions of the bill, to the members of the present College, would be a most high-handed measure, and one that we fear would lead to trouble. But let us carefully look into this bill and inquire how far its provisions are more desirable, than the act of incorporation passed in July, 1847. The very first clause of this Bill contains an allegation, which to say the least is questionable. It states that it is "highly desirable "that the medical profession of the Province of Quebec, "be placed on a more respectable and efficient footing." This commencement would lead the casual reader to suppose that the following clauses contain suggestions which are

in keeping with the advances of the day, and that as scientists, we were endeavouring to obtain an enactment which would raise the standard of medical education to the very highest pitch. Now we maintain that in our Province, we are far better off in that respect, than in some other parts of the Dominion, notably in the sister Province of Ontario, where the Profession is a most happy family, members of legitimate medicine being forced into communion with votaries of all the various pathys, who enjoy an equal status, and are possessed of equivalent rights, and furthermore are the very arbiters to settle the question, of who shall, and who shall not be, in future, admitted as practitioners of Medicine, Surgery and Midwifery, amongst them.

There is one feature of this Bill that we think very objectionable. The college of Physicians and Surgeons, for the Province of Quebec, as at present constituted, is open to all comers who hold the License of the College for four years. On payment of the small fee of ten dollars, and an annual subscription of two dollars, Licentiates become Members, and are eligible for election to the governing board. The College has granted its license to some 1,500 practitioners, but not more than 150 of these gentlemen have availed themselves of the privilege of membership. If the profession as a body politic cares so little about privileges that are open to it, we scarcely think that it will be legislated into altering its opinion or course of action. The present Members of the College, have complied with the law and contributed to the funds of the College, furthermore, they have assisted with their annual subscription in defraying the working expenses of the College. The College possesses a fund which we hope to see increased, so as to give it a permanency, in the acquisition of property, in the form of a building, library and museum, which each individual member will take pride in augmenting. These are the circumstances and conditions which will place the medical profession in this Province on "a more respectable and efficient footing," and not the very doubtful measure

of forcing these privileges by Act of Parliament on all members of the profession.

We pass over several clauses to which we can have no objection as they are mere matters of detail bearing on the election of the governing board of the College, but we may observe, that we do not regard this method of election in any way an improvement on the present system of election.

We come now to clause seven bearing on the qualification of those about to commence the study of medicine. This is a most extraordinary clause, it prescribes that a person must pass a preliminary and satisfactory examination on the following branches: (Then follow a list in conformity with what is demanded by the Council for Medical Education and Registration of Great Britain.) But at the latter part of the clause we read that the College may exempt from classical examination any person being the bearer of a diploma of Master of Sciences or a certificate testifying that he has successfully followed in a good educational establishment a course of study comprising the branches hereinbefore mentioned; now it strikes us that the promoters of this bill may possibly mean "Bachelor of Arts," instead of Master of Sciences, the latter is a degree which we do not believe is conferred by any University in the country. But then again, exempting from examination the bearer of a certificate of qualification from any good educational establishment appears to us to be a retrograde movement, and one which will not tend to place the medical profession in this Province on a "more respectable and efficient footing." With respect to the curriculum of study presented, it is meagre and deficient in many respects.

At clause ten, we read that no Student shall receive the College License, unlese he shall have passed a satisfactory examination, before the Board on the several branches, enumerated in the foregoing section.

Provided always that it shall be lawful for the said Board to grant the College License, without examination to any person bearing a diploma from a Canadian Incorporated

University, or School of Medicine, on condition that the same has been obtained, agreeably to the following regulations:

The regulations provide that the teaching bodies shall have hospital accommodation for their students, and other necessary apparatus and plates, without which a course of Lectures on any branch connected with Medicine, would be uninstructive, and furthermore, that all teaching bodies shall submit to the supervision in their examinations, of a committee of gentlemen, appointed by the Board, with a view of ascertaining if diplomas are granted according to the merits of the students.

Now this in principle, we object to. If we are to have an alteration in the present law, let us have but one door of entrance to the profession.

The license to practice should be accorded after due study and successful examination. The diploma of a University or incorporated school, is an honorary qualification, and can give no legal right to the holder of it to practice his profession. Allow the schools to teach as pleases them best. If they teach dishonestly the result will soon become apparent, but the College of Physicians and Surgeons, which is the administrator of the law of the land, ought to be empowered to test to the fullest extent the qualifications and knowledge of those who undertake the responsible duties of a Physician, Surgeon and Accoucheur.

There is one other point which we deem it advisable to mention, one which we doubt not has escaped the promoters of this bill, though we feel certain that they will agree with us in its necessity. Like all societies of men we are liable to admit into our ranks unworthy members. We think the college should have the power of removing unworthy members by expulsion,—such expulsion to deprive the unworthy member of all right to practice his profession. We observe in the Legal profession an erring brother can be brought up and reprimanded or deprived of his gown by the Council of the Bar of his district; why should not the

Medical profession secure similar powers,—then, indeed, should we be moving in the right direction, and seeking to place the Medical Profession of this Province on "a more respectable and efficient footing."

We do not oppose the alteration of the present law, but we do say, let us in all decency submit the proposed amendments in regular form to the members of the College. There is no hurry, the profession is not without a good act, and there is no time between this and the 20th of November to fairly go into this measure; the present time is inopportune. The schools and Universities are in full session; many of the members of the College are busily engaged in the labour of teaching. This matter should not be hurriedly put through, but carefully and intelligibly discussed, at as full a meeting of the members of the College as can be summoned. We say as can be, because there is no provision in the act under which we are governed whereby a general meeting of the members of the College can be called except at the regular triennial meeting. Parliaments are jealous of any infringement of laws or acts which have an existence, so that in presenting a bill of amendments which has not been conceived and brought forth in regular order, the promoters of the bill will place themselves in the position of being refused, and of seeing all their labor go for naught.

BILL.

An Act to incorporate the Members of the Medical Profession, in the Province of Quebec, and to regulate the Study and Practice of Physic and Surgery therein.

1. WHEREAS the laws now in force for regulating the practice of Medicine, Surgery and Midwifery require amendment; and whereas it is highly desirable that the Medical Profession of the Province of Quebec, aforesaid, be placed on a more respectable and efficient footing, and that better means should be provided for the conviction and punishment of persons practising Medicine without license: Be it therefore enacted by the Queen's Most Excellent Majesty, by and with the advice and consent of the Legislative Council and of the Legislative Assembly of the Province of Quebec, and it is hereby enacted by the Authority of the same, that from and after the passing of this Act, the Act or Ordinance of the Legislative

Council of the late Province of Quebec, passed in the twenty-eighth year of thereign of His late Majesty King George the Third, and entituled: *An Act or Ordinance to prevent persons practising Physic and Surgery within the Province of Quebec, or Midwifery in the Towns of Quebec and Montreal, without license*, and all other Acts or parts of Acts in any manner relating to the mode of obtaining Licenses to practice Physic, Surgery or Midwifery shall be and are hereby repealed, except in so far as relates to any offence committed against the said Acts or any of the same before the passing of this Act, or to any penalty or forfeiture incurred by reason of such offence.

2. And whereas it is expedient that the Medical Profession, within the Province of Quebec, be empowered under certain restriction, to frame its own statutes for the regulation of the study of Medicine in all its departments and By-laws for its own government, be it therefore enacted that from and at the passing of this Act, all Physicians empowered to practice Physic, Surgery and Midwifery within the Province of Quebec, and their successors shall be and are hereby constituted a body politic and incorporate by the name of *The College of Physicians and Surgeons of the Province of Quebec*, and shall by that name have perpetual succession and a common seal, with power to change, alter, break or make new the same; and they and their successors by the name aforesaid, may sue and be sued, implead, and be impleaded, answer and be answered unto in all Courts and places whatsoever, and by the name aforesaid shall be able and capable in law to have, hold, receive, enjoy, possess and retain for the ends and purposes of this Act and for the use of the said College, all such sums of money as have been or shall at any time hereafter be paid, given or bequeathed to and for the use of the said College; and by the name aforesaid shall and may at any time, without any Letters of Mortmain, purchase, take receive, have, hold, possess and enjoy any lands, tenements, or hereditaments, or any estate or interest derived or arising out of any lands, tenements or hereditaments or the purposes of the said College, and for no other purposes whatever; and may sell, grant, lease, demise, alien or dispose of the same, and to do or execute all and singular the matters and things that to them shall or may appertain to do in the premises; Provided always that the real estate so held by the said Corporation shall at no time exceed in value the sum of one thousand pounds.

3, And be it enacted, that from and after the passing of this Act, the persons who compose the College of Physicians and Surgeons shall be called "*Members of the College of Physicians and Surgeons of the Province of Quebec.*"

4. And be it enacted, That the affairs of the said College shall be conducted by a Board of Governors composed, first, of two delegates from each of the Universities, Colleges, or Schools of Medicine incorporated within the said Province, giving medical tuition according to the Provisions of this Act, or which shall be established hereafter; provided that no professor belonging to any of these teaching Bodies shall be eligible to be a member of the Board, except as a representave of the College by which he is delegated; 2. of 24 Members elected by the registered Physicians of the Province, one member being elected for each territorial division having a member in the Legislative Council by the registered Physicians residing within said division; and the mode of election together with the time thereof shall be determined by a By-law of the Board, and in default thereof, by the Lieutenant-Governor in Council.

The Members of the Board shall be elected for three years; but in case of decease or resignation, a new election shall be held if the member represent a said territorial division, or in the case of a delegate from an University, the University shall appoint another member to replace the member deceased or resigned.

The first election of Members to represent the territorial divisions and the

incorporated Universities or Schools on the Board shall be held on the , and the present Board shall fix and determine the place within reach of the divisions, name and appoint Returning officers, and shall take all necessary measures for that purpose. In case of contestation, the Board shall decide and adjudge, and if the election be null or illegall, they shall order another to be held.

All physicians within the Province empowered to practice Physic, Surgery and Midwifery, shall be entited to vote and may be elected Governors at the first election.

But no person shall vote at any of the subsequent Elections, nor be eligible as Governor, unless he shall have previously paid up all dues imposed by and satisfied the new Board.

The Board shall name and appoint a President, a Vice-President, a Registrar, a Treasurer, and all other officers required for carrying out the provisions of the law.

Within each territorial division, a medical association may be established (agreeably to the By-laws of the Board) of which all Physicians residing within said Division shall form part, and of which the representative on the Board shall be the *ex-officio President*.

5. And be it enacted, that the said Board of Governors, shall be, and they are hereby constituted "*The Provincial Medical Board*," in which capacity they shall meet for the examination of candidates not less than twice in each year, at the time and place as to them shall be deemed most fit, and on which occasions seven members shall be a *quorum* for the transaction o business.

6. And be it enacted, That from and after the passing of this Act, no person shall be admitted as a Student of Physic, Surgery or Midwifery, unless he shall have obtained a certificate of qualification from the said Provincial Medical Board.

7. And be it enacted, that no certificate of admission to the study of Physic as aforesaid shall be allowed by the said Board to any claimant of the same, unless he shall have passed a preliminary and satisfactory examination on the following branches; English, French, Latin, History, Geography, Mathematics, Algebra, Geometry, Natural Philosophy and Physics and unless he shall be the bearer of a Certificate vouching for his good moral character. Provided always that it shall be lawful for the said Board to exempt from classical examination any person being the bearer of a diploma of Master of Sciences or of a certificate testifying that he has successfully followed in a good educational establishment a course of study comprising the branches hereinabove mentioned.

8. Be it enacted, that from and after the passing of this Act, no person shall practice Phisic, Surgery or Midwifery, unless he shall have obtained a license for that purpose from the said Provincial Medical Board.

9. Be it enacted, That no person shall apply for, or be entitled to, a College License unless he has followed uninterruptedly during a period of (not less than four years, to be reckoned from the date of his admission by the Board to the study of Physic), in some incorporated Canadian University, College or School of Medicine, two six months' courses of Anatomy and Physiology—of Practical Anatomy—of Surgery—of Practice of Medicine—of Midwifery—of Diseases of Women and Children—of Chemistry—of *Materia Medica* and Pharmacy—*one six* months's course of Institutes of Medicine—One three months' course of Medical Jurisprudence and Toxicology—one three months' course of Botany—one six months' course of Clinical Medicine—one six months' course of Clinical Surgery—one three month's course Lying in Hospital (or a certificate testifying that he has attended six accouchments—a three months' course of Hygeine—of Practical Chemistry—of Practical Surgery—and produce a certificate of his age of majority and of a good moral character.

10. And be it enacted, That no student shall receive the College license unless he shall have passed a satisfactory examination before the Board on the several branches enumerated in the foregoing section.

CANADA

MEDICAL & SURGICAL JOURNAL.

ORIGINAL COMMUNICATIONS.

Case of gun-shot wound of the abdomen, with visceral injury—Passage of 18 shot, including one buckshot, per anum—Recovery. By E. D. WORTHINGTON, M. D., Sherbrooke, P.Q.

I am induced to report this case as a remarkable instance of recovery from what was regarded, at first, as a mortal injury; involving, in my opinion, perforation of the stomach; unattended with marked inflammatory symptoms or constitutional disturbance.

Archibald McConechy, aged 21, a school-master, of temperate habits and good constitution, 5 feet 9 inches in height and weighing 135 lbs., ate a hearty breakfast about 9 o'clock on the morning of the 30th October; and, it being a school holiday, he, with four young lads, went out shooting in the woods near Sherbrooke.

The party left the town about 10 o'clock. and after a walk of a mile or so, went into the woods. After rambling about a short time, and shooting an unfortunate squirrel, and some small birds, they arrived at a point exactly 350 yards from the edge of the clearing, where stood a large spruce tree, which presented a most tempting display of gum. But alas, this gum, like many other of this world's treasures, was not easily accessible. One of the boys "went for" the old gum tree and failed. The master then attempted the difficult feat, and this is the way he did it. He placed the butt of his gun on the ground, the hammer being down on the cap, and rested the barrel on a low scrub beech that grew close to the foot of the spruce

tree on his right of the tree as he stood. He then picked up a piece of split wood, about four feet long, intending to place this against the tree, at an angle, climb up so as to get one foot on the end of this split stick, and so reach the coveted gum. In placing the split stick, however, the gun barrel was rather in the way, he took hold of the muzzle of the gun in his left hand—the stick being in his right—and in endeavouring to put the gun aside, a branch of the scrub beech must have caught the hammer, and fired the gun. This is the account given by the lad before alluded to, and I accept it, as he was standing close to Mr. McConechy—touching him in fact—at the moment ; but, as there were five persons present, so are there five different versions as to minute details. I am thus particular as to time and circumstances, so as to arrive at some idea of the state of the stomach about an hour and a half after a hearty meal, and also as to the direction of the wound. According to the above description the muzzle of the gun must have been *within* 12 inches of Mr. McC's body, and the burnt state of his vest, the shape of the holes in his trowsers, flannel drawers, two flannel shirts, and the appearance of the wound corroborate the description, and prove that the whole charge entered the abdominal parieties in one compact mass. The force of the explosion caused Mr. McC. to recoil against the lad beside him. I may as well state here that the gun was an old one, single barrelled, of 6-8ths bore, with a very stiff spring, and that it was loaded with a very uncertain quantity of both powder and shot. The sporting party carried their ammunition in the most unsportsmanlike style—to wit—in two glass bottles ; and measured the charges in the palms of their hands ; totally ignoring all the modern improvements in the art of war ! The phial containing the shot had a mixture of all known varieties from snipe to buckshot ! Mr. McC. was uncertain how many buckshot were in that particular charge ; at first he thought 4 or 5 ; then 2 or 3 ; and at last, as things passed along so harmoniously he came to the conclusion

that he might be mistaken, and that he might have omitted the buckshot altogether. In so thinking however, he is now satisfied that he was in error; as, in seeking since for hidden treasure, he has received indisputable proof that, at least *one buck shot* was in the charge. Exclaiming that he was shot, he opened his waistcoat, the lining of which was on fire, and sat down for a few moments; then started to walk, and immediately began to vomit blood. He thinks that with this blood was mixed a quantity of food. The younger lads were sent for aid, and with the assistance of the older ones he walked the 350 yards, to the edge of the clearing, vomiting blood by the way in large quantity. Here he was met by a farm horse and cart, and driven over very rough ground to the main road and to his lodgings in Sherbrooke. On the way he was seen by a medical man.

I saw the patient about one o'clock, a few minutes after his arrival. His appearance was that of a person suffering from severe shock. Countenance pale, anxious and pinched; surface cold. Pulse 68 and shaky. Constant desire to vomit, bringing up at each effort a spoonful or two of dark blood. Had him undressed and put into bed, with bottles of hot water to his feet, and gave him the only thing at hand—a dose of morphia in a spoonful of brandy and water. While examining the wound he brought up fully 10 ounces of dark blood, containg coagula, but no trace of food.

The margin of the wound ragged and slightly oval, was $1\frac{1}{4}$ by $1\frac{1}{2}$ inches in diameter, and exactly $1\frac{1}{4}$ inches above, and $1\frac{3}{4}$ inches to the left of the centre of the umbilicus. Its long diameter directed upwards. Not a trace of blood appeared externally. The wound presented the appearance of a packing of woollen fibre in blackened and charred tissue, riddled with shot, but so intimately blended as to form one compact mass. I carefully removed all that was removable of the debris; and one very irregularly shaped piece of lead: aud in the act of vomiting a wad of thread,

evidently the sewing of a button escaped from the wound. There was no other abrasion or bruise; affording additional evidence that the whole charge and perhaps more than the charge, had entered at this point.

The patient wore a heavy cloth double breasted vest; a hole was blown through this vest of three inches in diameter, and a button, a composition perforated button—I mean without the old-fashioned metal shank—and which had occupied a position represented by a point not far from the centre of this hole—and which, moreover, Mr. McC. positively states was not wanting before the accident—has most mysteriously disappeared. I think therefore that in the absence of any opposing substance capable of diverting a charge at such a short range, and in the absence of any evidence of "scattering" on the person, or clothing of the unfortunate sufferer, that this button, and a portion of its surroundings, must have followed the line of fire; and if I am correct in my proposition, this button and a quantity of shot still unaccounted for is now stowed away in some of the recesses of Mr. McConechy's peculiarly unsusceptible abdomen.

About 2 p. m., Drs. Johnston, Jones and Tabb saw the patient with me, and we all thought it better not to interfere further with the wound; not only as there were no indications for heroic interference, but as the patient looked as if he could not possibly survive more than a few hours. The wound was covered with a piece of lint, saturated with carbolic acid and linseed oil, and a double of lint enclosing a piece of ice, placed over this. Introduced a catheter and drew off a pint of normal urine. Before leaving gave 20 minims of Battley's solution of opium in brandy and water and left absolute orders that, under no circumstances, should anything be given by the mouth, but a very small piece of ice or a teaspoonful of brandy and water.

4 p. m.—Skin rather warmer. Pulse 78 and of better volume; stomach continues very irritable, but has vomited

only twice, about a tablespoonful of dark blood each time. No more brandy and water.

8 p. m.—Skin hot. Thirst, dry tongue. Pulse 112, but not hard. Irritability of stomach peculiarly distressing, but no vomiting since 4 o'clock. Peculiarly sensitive state of the skin of the abdomen, particularly near the wound; and a marked involuntary effort on the part of the patient to keep the side quiet in the act of respiration. No cough at any time. Rather sharp twinges of pain at intervals of about five minutes, in and rather above the wound. Prefers to lie on his back with the thighs rather flexed on the abdomen. Hypodermic injection of Battley, 20 minims. Ice freely to the wound and sparingly by the mouth. At 10 p. m. to have 5 minims of Tr. Aconite (Flemings). Midnight, pulse 132. Temperature increased. I regret that owing to an accident to my thermometer I am unable to give the temperature more accurately, Constant nausea, but no vomiting; gave 5 minims of Tr. Aconite, and having a reliable attendant for the night, ordered this dose to be repeated every two, three or four hours, according to the state of the pulse. Passed 8 oz. of clear urine.

31st.—8 a. m. Passed rather a comfortable night; nausea in paroxysms. At 4 a. m. had vomited 4 oz. of grumous blood, passed 6 oz. of bloody urine. Had Aconite at 3 and 6 o'clock. Pulse 125; tongue clean and moist; thirst less.

11 a. m.—Saw him with Dr. Johnston. Pulse 120; skin and particularly palms of the hands moist. Countenance good; is rather cheerful, but has occasional twinges of pain about the wound; nausea less frequent; continue Aconite, one minim every hour. Saw the patient every hour or two during the day, rigorously enforcing the law that nothing should be given, except by myself personally, but the small piece of ice as before, and that as seldom as possible;—not an easy order to carry out in private practice in the country—in the face of sympathetic female

attendants. From the first I was firmly persuaded that there was perforation of the stomach from the shock considered in connection with the bleeding, the persistent nausea, and the situation and apparent direction of the wound, and while Dr. Johnston in the main agreed with me, he rather inclined to the opinion that either the Liver or the Spleen was the source of the Hæmorrhage.

However, the indication was to keep all the viscera in the abdomen as quiet as possible, and the stomach as empty as possible, and whether it was brandy and water, or ice, our patient never had at any one time enough to do more than moisten the mouth, fauces, and *perhaps* the œsophagus. Passed water twice during the day, but quite normal in character

Midnight.—Pulse 118; gave 25 minims of Battley. Aconite to be continued.

Nov. 1st.—8 a. m.—Saw him with Dr. Austin. Passed a very good night; no vomiting since Sunday at 4 a. m. Paroxsyms of nausea less frequent, induced always by the slightest attempt at motion. Pulse 112; soft. Tongue clean and moist, inclined to sleep; wound healthy. A large square of lint wet in tepid water applied over the carbolic acid dressing and covered with oil silk. Saw him very frequently; no change during the day.

In the evening his father, the Rev. Mr. McConechy, of Leeds, and his mother arrived, and in them I had most faithful allies, relieving me of a good deal of anxiety and police duty. Aconite continued with Battley when necessary.

Nov. 2nd.—Patient very comfortable, had a good night; stomach comparatively quiet. Pulse 112. Tongue moist; skin cool. Excessive tenderness of abdomen—as before described—continues. The slightest touch causes him to wince, but he bears firm equable pressure tolerably well. Occasional twists of pain deep seated, near the wound, and pain whenever he tries to pass urine. No steady pain however, no tympanites, and nausea less troublesome.

10 p. m.—With a syringe affixed to a gum elastic catheter threw up the Rectum 20 minims of Battley in two ounces of beef tea.

Nov. 3rd.—Was sent for at 2 a. m. Patient suffering from constant and depressing nausea. Increased pain around the wound. Pulse 110; skin cool. Gave hypodermic of 25 minims of Battley with great relief. To have injection of beef tea ℥ ii.

8 a. m.—Stomach quiet. Pulse 110. Aconite regularly continued.

10 p. m.—Nausea has entirely disappeared, the stomach being perfectly quiet all day. Patient very cheerful; less tenderness of abdomen. Threw up the Rectum a pint of warm water.

Nov. 4th.—9 a. m.—Patient "jolly." Pulse 102. He thinks he could eat a little. I think he won't. As the result of last night's injection his mother proudly handed me a flattened duck-shot which she had just found in the bed pan, and as it had not yet been emptied I continued the investigation with the father, and was rewarded by the discovery of one smaller shot likewise flattened. The mother's treasure weighed 5 *grains*, mine only *two!* This is the first time the bowels have been moved. The motion was rather copious, and contained no trace of blood.

9 p. m.—Very comfortable all day; pulse 84. Aconite every three hours. Beef tea injections ℥ ii. every four hours. Brandy to be added to this and the Aconite discontinued, if necessary.

Nov. 5th.—Complete line of demarcation round the slough; no discharge from the wound. Pulse 80. Aconite every three hours. Beef tea enemata. Stomach quiet. Bowels moved once; passes water freely. 10 p. m. Battley 25 minims as he thinks the bowels may be moved again.

Nov. 6th.—Early this morning the patient had two very large and offensive discharges from the bowels, which I regret that I did not have an opportunity to examine. Every motion before this had been washed and strained in

the most careful manner until the whole house was suggestive of a Montreal Hotel. It was really aggravating to have what promised such an interesting field for minute research, so recklessly thrown away.

In a slight motion in the afternoon discovered some woollen fibre, the color of the waistcoat, and some shreds of paper.

Nov. 7th.—My patient wonderfully well. Pulse 78. To have a tablespoonful of chicken broth every two hours.

It is to be remembered that since the accident, eight days ago, not one drop of anything, not even barley water, has passed the patient's lips; nothing but the small piece of ice, and the teaspoonful of brandy and water, the latter after the first 24 hours, not oftener than every 3 or 4 hours, so that it may be said the stomach was kept tolerably empty. Aconite discontinued,

Nov. 11.—Patient improving every day. Chicken broth or beef tea every two hours, one tablespoonful as before. Bowels freely moved; *passed one shot.*

Nov. 12th.—This evening about 5 o'clock he had a fluid motion, and on examining it himself he found 14 *shot of various sizes and one buckshot! The* 14 *shot weighed exactly* 30 *grains, and the buckshot* 34 *grains!* They were all irregular in shape, some being quite flattened. He seems quite jubilant over his exploit. Sat in an easy chair for some time, and evidently thinks he is going to recover.

The wound looks well, the slough beginning to get detached and pushing out with it a mass of woollen hairs an inch and a quarter in diameter; it looks exactly like the hairy head of a "Jack-in-the-box" ready to jump out, but we have determined not to touch "Jack" not knowing precisely his size, or what he is standing upon.

Nov. 15.—Patient doing well, and getting rather reconciled to the Homœopathic system of feeding. The slough being quite detached I lifted it out of the wound very tenderly. It consisted of woollen fibre held together with disorganized tissue. Very much to my relief it revealed no-

thing more terrible than the belly of the Rectus; ploughed into, it is true, but healthy looking. From a pouch in the belly of the muscle I picked out 7 shot weighing 18 grains. On cleaning out the bottom of the wound it was evident that the muscle was not perforated to any depth in the line of the fire; but that the charge had been turned aside by the Rectus, its sheath, and probably one of the Lineæ Transversæ. The points where the shot had diverged were fully exposed to view. One in particular, which would readily admit of the passage of a buck shot started from the upper margin of the bottom of the wound, ran for half an inch parallel with the fibres of the Rectus, and then dipped into its belly in the direction of the large curvature of the stomach. Two other tracks of entrance of lesser size entered from the lower margin of the wound, passing to the left. All these shot were irregular in shape, some being completely flattened. I think it may be taken for granted that this flattening of the shot, was not altogether due to the resistance of the clothing, the skin, cellular tissue, and muscular fibre, but may be accounted for, in a great measure, by the impulse of the shot against each other, and against the side of the gun barrel at the moment of the explosion. The shot found in the wound were quite as much flattened as those that passed from the bowels.

Nov. 25.—Wound quite superficial. On the 21st had his clothes on and sat up all day, Walked a little. Had some chicken and blanc mange for a Sunday dinner; being solid food for the first time. Wanted to go out and may be considered well. Has no pain or uneasiness anywhere, bowels regular, in fact it may be said that "all the functions are in harmony of action."

Has had no aperient medicine of any kind.

In offering this rather remarkable case to your Journal, I have only to add that its fortunate result must be attributed in the first place to an unusually small charge of powder; next to the idiosyncracy or invulnerability of the patient, and lastly to the combined influences of non-intervention and starvation.

Case of Pedunculated Fibroid Tumour of the Uterus, complicating Pregnancy—Peritonitis—Death. By T. G. RODDICK, M. D., Professor of Clinical Surgery McGill University, Attending Physician to the Montreal General Hospital.

(Read before the Medico-Chirurgical Society.)

Mrs. D., aged 29, healthy looking, married seven years, no children, no miscarriages, consulted me on the 11th July last, giving the following history:—She had not menstruated for four months, thought herself growing somewhat stouter, breasts at times painful, felt no life, but was nevertheless of the opinion that she was pregnant, having had slight morning sickness, and many of the sensations peculiar to that condition. She was not however uneasy on that account although she thought it remarkable, as did I, that she should have been pregnant at this late date of her marriage. She now came to consult me respecting a pain in the right inguinal region, from which she had suffered excruciating agony at times during the past four months or ever since she ceased to menstruate. This pain would seize her without a moment's warning, in bed, in the street, in church, and would compel her if walking or standing to at once sit or lie as opportunity offered. It would pass away in from three to five minutes almost as rapidly as it came, leaving her, however, thoroughly prostrated and her nervous system for some hours quite unstrung. She stated besides that she had recently felt a lump above the right groin which she believed had something to do with the production of the pain. Her bowels had been habitually constipated for some months, and at times she had frequent desire to make water with occasionally a straining after the act. Her appetite was good and she slept as well as ever, being in fact in good health excepting for this pain.

I found on examining the abdomen that there was some uterine enlargement but not so much probably as one

would expect to find after four months. I did not examine stethoscopically. In the right inguinal region, almost exactly I should say over the position of the right ovary, although perhaps a little higher, I came across a firm movable mass of the size of a large hen's egg, being longer in its vertical than its horizontal diameter. As I have said it could be moved within a limited area, but any undue pressure elicited considerable pain of a darting character. The patient strongly objected to a vaginal examination so that the means for diagnosis at my disposal remained limited. I accordingly ordered her a *placebo* in the shape of a belladonna and chloroform liniment with instructions to report herself in a few days.

I need not say that I remained very much in the dark as to the exact nature of things, although my surmises were not a few. As I had not examined the condition of the uterus and its relations, however, and being under the impression from external examination that that organ was not enlarged sufficiently to contain a fœtus in the fourth month, I leaned to the belief that I had to do with a case of extra-uterine pregnancy, either ovarian or tubal. I thought of floating kidney but the nausea said to be induced by pressure on that organ under these circumstances was absent, and besides it was too small to be mistaken for an adult healthy kidney. Inflamed ovary occurred to me, but then again inflammation of that organ is accompanied with constant pain and great tenderness and would not be likely to last for such a time.

July 17—(Six days after the consultation above referred to.) I was sent for to-day to visit Mrs. D., her husband informing me that she had been suffering intense pain all night and vomiting incessantly. I found her in bed, anxious looking, features pinched, pulse 112, and wiry in character, tongue furrred, constant vomiting, some tenderness on pressure over the entire abdomen, but especially pain in the right inguinal region. I found the tumour before described in exactly the same position and not in

itself more painful than before. I now made a vaginal examination and at once satisfied myself that there was a fœtus in utero, but could not by the most careful combined internal and external manipulation feel the tumour through the vaginal wall. This I readily made out, however, that on moving the uterus from side to side I also moved the tumour and *vice versa*, thus proving that they were intimately connected.

As to treatment I ordered locally turpentine epithems to be followed by hot poultices of linseed meal, and internally powders containing half a grain of morphia, a grain of calomel and ten grains of bismuth, to be administered every three hours ; also lime water in milk and weak brandy and water at regular intervals.

July 18—The symptoms gave way to treatment for about twelve hours after my visit the day previous, but were now as violent as ever. I substituted for the powders a mixture containing hydrocyanic acid, solution of morphia, and liquid bismuth, and applied a blister over the painful spot on the right side to be followed also with the linseed meal poultices. As her bowels had not acted for three days I ordered a simple enema.

July 19—Pulse 120 small but regular—temperature 101½. The vomiting is not so constant nor is the pain so severe since the application of the blister. The patient's general appearance however is more unfavorable and the prospect is hourly becoming less promising. Besides I am not at all clear as to the cause of such alarming symtoms. They are not unlike those produced at the time of rupture of the investing membranes in cases of extra-uterine pregnancy, and why I have asked myself although she is pregnant may not one embryo be formed and propagated outside the uterine cavity, while another is undergoing its natural development within? I could think of no benign tumour as likely to produce such mischief especially when floating loosely in the abdominal cavity and not pressing, as far as could be made out, on anything but

the bowels and peritoneum and not firmly on them as its free motion indicated. Could it be malignant disease of the ovary, or a malignant tumour connected with the uterus? There were many chief symptoms of these absent, such as the continuous lancinating pain, the want of eachexia, and the fact that cancer of the ovary at all events is almost always secondary to malignant disease elsewhere.

At my request Dr. Drake was called in consultation. After examining the case most carefully and in our subsequent conversation, he inclined very much to my theory of extra-uterine (probably tubal) pregnancy. The existence of a fœtus in utero was however to him, as it had been to myself, the grave objection to such a supposition, although why we thought could not this anomaly be explained on the same principle as the well recognized phenomenon of superfœtation. I have subsequently learnt in looking up the literature of the subject that this is a recognized fact. Leishman in his excellent system of midwifery says it is admitted on all hands that superfœtation may take place in cases of extra-uterine pregnancy. An example of this he states is reported by Montgomery, in which, while the product of extra-uterine gestation remained encysted within the abdomen the woman bore three children. A similar case (to quote from the same author) has been reported by Dr. Steigertahl; and another still more interesting by Cliet of Lyons, in which a woman died suddenly, and upon dissection, an extra-uterine fœtus of five months was found in the abdomen, while a fœtus of three months occupied the uterus.

Dr. Drake suggested the possibility of the tumour being cystic disease of the ovary, as he was reminded of a case of a somewhat similar character in his own practice in which after death he found this condition of the ovary. The other disease I have mentioned and which occurred to myself we decided on excluding for the reasons I have given.

The only alteration we made in the treatment was the application of a dozen leeches to the bowels, the majority of them to be placed over the right inguinal region.

10 p. m. (18th). The majority of the leeches have taken and the amount of blood extracted has been considerable. She has now a large linseed poultice over the entire abdomen. The pulse is steadily going up, being now 130; temperature 102‡; respirations slightly hurried. For the vomiting, which still continues, I have ordered iced champagne. She has slight retention of urine, but not sufficiently urgent to indicate the use of the catheter; it may probably be due to the morphia of which she is taking half a grain every four hours.

Since the consultation this morning Dr. Drake and I have had a conversation respecting the case, and after looking into it more thoroughly we are both inclined to throw up the diagnosis of tubal fœtation for the reason chiefly that the firm, dense feel of the tumour has remained unaltered since the time I first examined it nine days ago. If the sudden accession of peritonitis and vomiting had been due to the rupture of the investing membranes of a fœtus extra-uterine, one, we argued, would expect to have by this time some alteration in the shape and consistence of the tumour suspected to be of that character. Nothing of the kind had however occurred, the mass being of exactly the same dimensions, shape, and consistence as when first noticed by myself. After studying the case from its various standpoints and weighing the evidence at our disposal most minutely, we come to the conclusion (the credit of having made the suggestion being due Dr. Drake), that in all probability we had to deal with a *pedunculated fibroid tumour of the uterus*. There was one puzzling question, however, which amounted almost to a fatal objection to this theory, viz:—Why should a simple insignificant tumour or growth, floating loose in the abdominal cavity, in the first place during a period of four months create at times pain of the most severe character, and again without a

moment's warning light up a fatal peritonitis with its concomitant distressing symptoms. Notwithstanding this rather formidable stumbling block we decided on adhering to this diagnosis.

July 29—This morning the patient's condition is if anything more alarming than before; vomiting incessant, approaching a stercoraceous character; tongue covered with a deep yellow fur; pulse 140, small and slightly irregular; a subicteroid hue of skin; features pinched; slight delirium. At my request Dr. Howard met Dr. Drake and myself in consultation, After examining the patient and hearing the history he (Dr. H.) concurred with us most emphatically in the diagnosis of pedunculated uterine fibroid. He suggested the employment of morphia hypodermically. Otherwise the treatment is to be continued unchanged.

The patient gradually sank and died on the evening of the 21st, no change of a favorable character having occurred in the symptoms during the last forty-eight hours.

Autopsy—Ten hours after death :— Drs. Cameron and Burland of the Montreal General Hospital, kindly assisted me. Rigor mortis well established. During the death struggle the fœtus had been expelled and lay invested with its membranes partially extruded from the vulva. On opening the abdominal cavity the peritoneum was found universally injected and the intestines congested in places. The uterus was large and flaccid not having contracted to any extent after the expulsion of its contents. Growing from the right side of the fundus and attached to it by a pedicle about three quarters of an inch long, was a *fibroid tumour* of the size of a large hen's egg, thus confirming in every particular the last diagnosis made. The peritoneum, universally injected, was in this locality more congested looking than elsewhere, having indeed in places a dark, almost gangrenous, appearance.

The other organs were healthy.

The specimen, neatly put up by Dr. Cameron, curator of the museum, stands on the table for your inspection.

Remarks.—This case, I take it gentlemen, has many points of extreme interest connected with it, as well in a physiological as a pathological point of view. It is I think interesting physiologically in connection with the great length of time that had elapsed (nearly eight years), before impregnation was accomplished, notwithstanding the uninterrupted marital relations. Could the fibroid growth have originally been embedded in the uterine walls, and by pressure have prevented the congress of germs necessary for ovulation; or did it produce, as so often occurs with fibroid growths, that peculiar catarrhal condition of the uterine mucous membrane so fatal to impregnation? This I look upon as a point of considerable interest, and if explained might assist in the solution of many cases of sterility.

Another matter, however, not less perplexing to me in regard to this case is the occurrence of such fatal symptoms from so slight a cause. We can readily understand a foreign body in the peritoneal cavity (such as the tumour under discussion might be considered) producing during its growth some uneasiness and localized pain, but by what process it could bring about the mischief related in this case I am puzzled to understand. We are taught in fact that the more pedunculated fibroid tumours of the uterus become the less dangerous they are. Dr. Barnes says he has known them to acquire a pedicle so long that the tumour could be grasped in the hand through the abdominal wall, and be moved freely about, only restrained by its mooring to the body of the uterus, which is the counterpart of my case. Further he says when in this condition the subject may go through pregnancy and labour quite unaffected. By no author in fact with which I am acquainted is simple pedunculated fibroid looked upon with much disfavour. Prof. Turner as quoted by Dr. Barnes says, "Should a subperitoneal tumour be at-

tacked by inflammation of its peritoneal investment, and contract adhesions to surrounding parts, it is thus placed in a position favorable to become separated from the uterus. Even if the tumour were to attach itself to a fixed part, as the pubis or other portion of the pelvic wall, and the woman subsequently become pregnant, the growing uterus gradually rising into the abdomen, might exercise such an amount of traction upon the pedicle as to attenuate it even to complete separation." Such, according to these eminent authorities, seem to be the most serious consequences likely to accrue during the process of separation of these subperitoneal growths.

The only explanation I should attempt for the occurrence of peritonitis in my case is this: the tumour may long before have formed rather firm attachments to one or more of the surrounding viscera, and as the body of the uterus enlarged and appeared above the pelvic brim it would drag on the pedicle in an upward direction. The growth, meanwhile, unprepared for separation, would be forcibly torn from its new relations producing lacerations more or less extensive of adjacent structures, which in their turn would be followed by minute bloody extravasations and then peritonitis.

Lastly with regard to treatment, the question might well be asked would the production of premature labour in this case have been a justifiable operation in the face of the existence of peritonitis, and in the event of its successful accomplishment might the cause of the inflammation have been removed, and the parts restored to something approaching a normal condition? This point I prefer submitting to discussion.

Hospital Reports.

MEDICAL AND SURGICAL CASES OCCURRING IN THE PRACTICE OF THE MONTREAL GENERAL HOSPITAL.

Case of Stone in the Bladder.—Severe affection of the bladder—Lithotomy—Death. Under the care of Dr. Ross; reported by Mr. H. A. EBERLE.

J. L., aged 60, was admitted into the Montreal General Hospital Nov. 8th, 1875. Is a rugged, well-built, stout man, rather below the medium height. Has an oblique inguinal hernia on the left side, and had an attack of primary syphilis seven years ago. Otherwise has been perfectly healthy.

Two years ago he first noticed, when the desire to void urine came on, that he had to hesitate before the flow would begin. This was accompanied with a scalding sensation. The necessity for rapidly obeying the impulse now became manifest, as also a more frequent desire to evacuate the bladder. Shortly after this feeble power of control began, there appeared blood in his urine. This bloody discharge did not last long, but it returned occasionally, and during its continuance he suffered much pain. Hæmaturia was noticed by him for the last time about six months ago; since then he has not been able to retain his urine longer than half-an-hour. Most severe pain attended each micturition, chiefly when the last drops were being expelled. He referred the pain most usually to the glans penis, and during the seizure would grasp the penis with a view of alleviating the pain. He complained also of much uneasiness in the bladder itself. No history of retention of urine could be ascertained. There is decided tenderness over the hypogastric region, most marked on the left side, extending thence into the left iliac region.

On admission, a rectal examination was made by Dr. Ross, when it was found that there was very considerable enlargement of the prostate gland, which appeared tender

to the touch. A full-sized, short-curved, steel sound was next introduced into the bladder with little difficulty, considering the size of the prostate gland. In consequence of the severe pain attending the passage of the instrument and of the complete emptiness of the bladder, no evidence of a stone could be made out.

Nov. 10—The desire to evacuate the bladder is much more frequent—every quarter hour,—and the pain attending each micturition is intense, shooting towards the lateral pelvic region. Was ordered the following ℞: Pot. Acet. ʒiv., Tr. Hyoscy. ʒvi., Aquæ Camph. ad ʒvi.—Tablespoonful every three hours.

Nov. 11—The urine was of a light yellowish color—alkaline, and on standing deposits a moderate sediment of a grayish white color. Under the microscope there was found chiefly mucus and pus cells, and a few phosphatic crystals.

Nov. 12—Another examination was conducted by Dr. Ross, the patient having been anæsthetized for the purpose. A moderate quantity of urine having been previously retained facilitated the exploration. The existence of a calculus was clearly shown by the sound; it was readily felt by the operator, and the peculiar click could be distinctly heard a few feet distant. A lithotrite was introduced, and the stone grasped and measured, its length being 1½ inches. Opium suppositories were ordered to be administered, and hypodermic injections in addition, if required, to allay pain.

Nov. 13—Bowels not been opened since his admission, was ordered Castor Oil ʒiss., followed by a simple enema three hours after. Has frequent desire to void urine, but scarcely an ounce comes away, and in it a quantity of blood. Pain most intense, over the pubic region.

Nov. 14—Bowels moved slightly; urine being retained was drawn off with the catheter, was pale yellowish, tinged with blood and offensive. A second enema administered to which was added Castor Oil ʒii.

Nov. 15—Lower abdominal zone tender on pressure. Small quantity only of urine was passed unassisted. Was ordered fomentations to abdomen. Appetite good; no fever; pulse strong, 66 per min. It was now decided by Dr. Ross, with the advice of several of his colleagues, to perform Lithotomy. It was the opinion of all who saw him that the case was more suitable for this than for Lithotrity. The chief objections to the latter operation were, the great sensitiveness of the urethra and bladder, as shown after even the most careful explorations; the very considerable enlargement of the prostate gland; the evidently diseased condition of the bladder, and perhaps parts around it, as shown by the tenderness of that region.

Nov. 18—Rested badly the previous night. Bowels opened well; stools dark and offensive. Pulse 68 per min. The *lateral operation* for lithotomy was performed by Dr. Ross, assisted by Drs. Campbell (Dean of the Faculty), Fenwick and Roddick. The usual preliminaries having been gone through, and the patient being under æther, Dr. Ross introduced the grooved staff, and the stone was readily touched. The staff was entrusted to Dr. Campbell. The perineum was steadied with the left hand of the operator, the knife entering a point in the raphe about an inch and a quarter in front of the anus, and an incision was carried obliquely downwards and outwards to midway between the left tuber ischii and the anus. After a few clean cuts, the left fore-finger was introduced and served as a director to divide the fibres of the levator ani muscle. By pushing through the cellular tissue, the groove in the staff could be felt. The knife, guided by the left fore-finger, was introduced into the groove of the staff, and was made to divide the membranous portion of the urethra along with part of the left lobe of the prostate. Thus a free opening was made into the bladder, from which a gush of urine followed the withdrawal of the knife. The left fore-finger was inserted through the wound into the bladder, but the stone could not be felt; this arose from the great depth of the bladder,

and from the stone lying at the fundus. The staff was withdrawn, and the forceps, with their blades closed, were introduced over the left fore-finger into the bladder. Some time elapsed before the stone could be touched, and when felt it would recede beyond the grasp of the blades. At length its position was ascertained, and on opening the blades widely the stone was seized, and was withdrawn with slow, cautious and undulating movements. There being no facets on the stone, it was concluded there was only one; only slight hæmorrhage attended the operation. The size of the stone nearly corresponded to the measurement made by the lithotrite a few days before the operation. Its length was one inch and five-eighths, width one inch, thickness five-eighths of an inch, and it was somewhat flattened and oval shaped, weighing ℥iii. A section showed it to be composed of concentric laminæ of lithic acid and phosphatic concretions surrounding a nucleus of lithic acid. The outside was studded with small beaded concretions of phosphates, giving it a rough exterior. Pulse five minutes after the operation, 120 per min.; breathing free and easy.

After treatment.—The surface was cleansed, and all clots removed. A silver canula covered with oiled linen was inserted through the wound into the bladder, but it was not retained, as new clots formed and prevented the free exit of urine. Was ordered beef tea, small quantity of brandy and barley water.

6 p.m.—Patient slightly restless; temp. 98.5; respirations 26; pulse 90. The urine trickles freely through the wound.

Nov. 19—More restless; complains of pain in the left pubic region; skin dry; heart's action regular; pulse 102; temp. 98.5. The urine passes freely through the cut. He refuses his diet; is taking morphia in moderate doses.

9 p.m.—The urine ceased its flow through the wound. Patient subsided into a sleep which lasted two hours; temp. 101. The House Surgeon, Dr. Cline, passed a large gum elastic catheter through the wound, and retained it there.

Nov. 20, 6 a.m.—Pulse 130; temp. 99.6. No urine oozes through the incision. Patient deeply comatose; breathing stertorous. The elastic gum catheter having slipt, was re-introduced into the wound, and a few ounces of offensive urine mixed with blood flowed out. Hot fomentations were applied over the abdomen.

1 p.m.—The face pale and pinched; heart's action exceedingly rapid, weak and irregular. Pulse 122; respirations 35; temp. 101.4. Complete coma; pupils dilated.

2.30 p.m.—Patient died, just forty-eight hours after the operation.

Autopsy, made twenty hours after death.—Cadaveric rigidity well marked. There was considerable hypostatic congestion of the lower lobes of the lungs. There was slight hypertrophy of the left ventricle of the heart. The valves were healthy and competent. The lining membrane of the aorta showed signs of commencing atheromatous degeneration. The liver healthy looking, and its weight 3 lbs. 14 oz. The spleen was about the usual size, but its capsule was greatly thickened and rough. The intestines were extensively glued together, giving evidence of chronic peritonitis; there were no signs to indicate recent peritonitis; old adhesions were found between the intestines and the peritoneum, bladder and liver. The kidneys were of normal size, a section showed deposits of fat about the pyramids; intense congestion of the lining membrane of the pelves of the kidneys, with numerous spots of ecchymosis beneath it, especially in the left kidney; the capsule was not adherent nor thickened, but could be easily torn off. On examining the roof of the pelvis, it was found that the portion to the left appeared prominent. This by dissection proved to be an abscess lying between the peritoneum and the left superior angle of the fundus of the bladder. It was about the size of a hen's egg, with very thickened walls, and evidently of old standing, and contained a few teaspoonfuls of dirty sanious matter.

The bladder was much enlarged, measuring five inches in depth, and its coats enormously thickened. In the substance of the anterior wall of the bladder, under the pubes was found another small abscess about the size of a hazel nut. The mucous membrane was deeply congested, and in some parts greyish in color. The peculiar prominent appearance of the muscular bands resembling the chordæ tendineæ was very well marked. Prostate gland much enlarged, the lobe about half divided through by the incision. Neck of the bladder also divided by the same.

Reviews and Notices of Books.

The Cholera Epidemic of 1873 *in the United States*: The introduction of epidemic Cholera through the agency of the Mercantile Marine: Suggestions of measures of prevention by JOHN M. WOODWORTH, M.D., Supervising Surgeon U. S. Merchant Marine Hospital Service. Washington: Government Printing Office, 1875.

The above work is a very valuable one from containing a large accumulation of facts concerning one of the most formidable diseases that the medical practitioner is called upon to cope with. These facts—arranged and digested so as to form a reliable body of evidence—were derived from a close observation of the numerous cases of this disease that prevailed during the last epidemic which spread through the neighbouring States. The supervising Surgeon, Dr. Woodworth, addressed a circular to leading Physicians in various parts of the Union, soliciting information upon the various points connected with the Clinical History, sanitary circumstances and upon such others as might throw light upon the introduction or extension of

the Epidemic. In reply he obtained communications from 84, which embraced reports of the disease as it appeared in 130 different localities. These have been used as the material from which the present treatise has been produced. Out of them a very carefully prepared history has been written by Dr. E. McClellan, Assistant Surgeon U. S. A. The volume is still more interesting and important from its also containing a "History of the travels of Asiatic Cholera," by the same gentleman and Dr. Peters of New York, and a "Bibliography of Cholera," by Dr. J. S. Billings, Assistant Surgeon, U. S. A. We have much pleasure in adding that the manner in which these gentlemen have severally executed their labors reflects upon them great credit. Their ability and pains-taking are clearly palpable throughout. And the result has been the joint production of a store-house of useful data,—which cannot be elsewhere had collected as they have been here,—and which all will find most serviceable, and easily available who desire to search into the peculiarities or literature of Cholera.

We ought to mention that the value of the publication is materially enhanced by illustrations, chiefly maps of infested localities, representing the course pursued by the Epidemic while spreading through a town or from place to place.

Lest our readers should imagine that the work is one merely of local interest, we may add, to undeceive them, that the second part which comprises "The travels of Asiatic Cholera," is a history of the disease from the earliest periods when it was identified down to recent times. And this history is distributed over 7 chapters, taking up 63 pages. And finally to this is appended a chapter on Cholera in India.

In conclusion, we have to thank our friends of the Supervising Surgeon's Department for their kindness in forwarding us a copy of this official treatise which will be

found, when wanted, a most valuable reference and authority for matters of fact upon the history of Cholera.

The Physician's Visiting List for 1876, being the twenty-fifth year of its publication. Philadelphia, Lindsay & Blakiston.

This useful little book comes to us in all its customary excellence, and we have, after twenty years trial, become so wedded to its use that we would willingly give two or three times the price asked. It is arranged for twenty-five, fifty or one hundred patients, and contains an Almanac. Table of signs, Marshall Hall's ready method in asphyxia, Poisons and their antidotes, a table for calculating the period of utero gestation, besides the blank leaves for the daily visiting list, monthly memoranda, addresses of patients and other names and addresses, Accounts asked for, memoranda of wants, Obstetric engagements, Vaccination engagements, Records of Births Deaths and general memoranda. We cordially recommend it as an indispensable necessity to every physician. It is to be had of Dawson Bros., St James street.

Cyclopedia of the Practice of Medicine, edited by DR. H. VON ZIEMSSEN, Vol. X.—Diseases of the Female Sexual Organs by Prof. Carl Schroeder of Erlangen, Bavaria, illustrated by 147 engravings on wood; translated from the German by Albert H. Burk., M.D., New York, editor of American edition. 8 Vo. pp. 575. William Wood & Co., 27 Great Jones' Street, New York, 1875.

During the last few years Gynœcology as an art, has made considerable progress, but the several workers in the field of observation are bringing into greater prominence the physiological and pathological bearing of the subject. It is somewhat disheartening to view the con

flicting opinions of different authors on points on which they should agree. Still in comparing their observations, they appear to differ on trivial grounds. Some seem to give their faith on mechanical alterations in shape as giving rise invariably to uterine symptoms. Others regard inflammation of the body or lining membrane as the origin of all uterine disorder. Whilst some insist on uterine irritation, or subinvolution or defective ovulation. In this treatise, however, we have very much of the pathological conditions met with and less of the more practical part so that it in some measure fills a hiatus, which has long been felt to exist. The author gives in few words a sketch of the history of gynœcology, pointing out the introduction by Lavert, of the Uterine Sound, which is still an instrument of great value, one perfectly indispensable to the practical man, although he declares that it has been superseded in a great measure by bi-manual palpation. In speaking of the position of the patient in examination, the author remarks that the "lateral position for the purpose of digital examination should be abandoned;" he prefers the examination with the patient on her back, for which purpose he specially recommends an iron chair. In this we can hardly agree, as under certain conditions we think the lateral method gives the examiner a better chance of ascertaining all he requires to know, and certainly it is quite as convenient a position for examination with the speculum as with the patient on her back. He shows, however, the importance of conjoined examinations, and also speaks of the necessity of examination per anum, which will often reveal conditions which are not to be made out through the vagina. In speaking of examination by the rectum, the author says: "The well-oiled hand is gradually passed through the anus—first two, then four fingers are introduced, and finally also the thumb is passed in with a rotary dilating motion. If the cutaneous margin of the anus threatens to tear, it is better to incise it at once, in one or more places." This appears to be un-

necessarily severe, and we should fear might add to the risk of tearing. Rupture of the bowel has, moreover, occurred in cases where the whole hand has been introduced. The author certainly explains that the lower part of the rectum is loose, and will admit of considerable distention, still we believe that it is only in very obscure cases indeed where such a measure should be attempted. In speaking of the speculum, the author says: "If the object is to expose the whole upper portion of the vagina, for the purpose of clear inspection, or of an operation, we confess our preference for the specula of Simon." Simon's speculum is a modification of that of Sims, and requires for its use the aid of two assistants.

After giving a general view of the various methods of examination, the author proceeds to diseases of the uterus. He next discusses menstruation and its derangements, Diseases of the Fallopian tubes; diseases of the ovaries. He then passes on to diseases of the uterine ligaments and adjacent portion of the peritoneum, then to diseases of the vagina and of the vulva, terminating with a description of rupture of the perineum and the best method of relieving that condition by the operation of perineoraphy. The work is illustrated by 147 most excellent engravings. The finish of the work is of superior excellence, clear and well impressed on good paper, it is a credit to the publishing house of Messrs. Wood & Co., and we heartily recommend it to our readers. It must be born in mind that these volumes are not to be obtained singly, and although this is volume X of the Cyclopedia, yet it is the fourth issued from the press. The entire series will form a most valuable work of reference, one which few real students can afford to be without.

Periscopic Department.

SURGERY.

A Case of Bifurcated Foot With Eleven Toes. By GEORGE J. BULL, M.D., of Worcester.

The following case of congenital malformation of the foot and leg derives additional interest from its extreme rarity. It furnishes an example of the anomaly known in Geoffroy Saint-Hilaire's classification as "bifurcated hand or foot," a deformity not uncommon in the hoofed mammalia, but so rare in man that Saint-Hilaire never found mention of a single well-authenticated case.[2]

A girl was born in Worcester on the 5th of May, 1875, healthy and apparently well formed, except in the left inferior extremity. Her left foot presents the heretofore

unheard-of number of eleven toes, and in its general appearance may be compared to a double or cloven foot. It has only one heel, but in front consists of two parts, which

1 Extract from a paper read before the Worcester District Medical Society, July 14, 1875.

2. Histoire des Anomalies, 1832, i. 694.

we may call the anterior and posterior feet. The anterior presents the great toe with four smaller toes, naturally placed and of normal proportions, but is twisted downwards and inwards in the position of extreme talipes equino-varus. Several pits or depressions over the tarsus mark the position of interspaces between the bones, and show the extent of the inversion, which is further shown by the fact of the inner border of the foot pressing against the heel. Continuous with the outer edge of the anterior foot, and curving beneath it, is the posterior part, looking not unlike a second foot, and furnished with six well-formed, small toes, situated directly below the other five. The plantar surfaces of the two sets of digits face each other, and are separated by a groove, which, beginning between the little toe of the anterior foot and the adjoining one of the supernumerary set, grows broader and deeper as it proceeds inwards, and, winding around the metatarsal bone of the toe, is lost in the furrow between the heel and the inner border of the anterior foot. The two feet are thus quite distinct at the phalanges, and their plantar surfaces are more or less free, that of the anterior foot being visible as far back as the first metatarsal bone, while that of the posterior foot is almost all to be seen, and terminates so naturally on the heel that it is difficult to say to which foot the heel more properly belongs. The eleven toes are perfect in form; none of them are webbed. The great toe and four smaller toes of the anterior foot are normally proportioned; the little toe is the exact image of the first toe of the supernumerary set which adjoins it; the second is the longest of the six, but does not at all resemble a great toe; the third and fourth are equal in length, the fifth and sixth are shorter, as are the outermost toes in the normal foot. The six extra toes remain almost without motion when the normal toes are flexed and extended, but they appear to have distinct metatarsal bones, and perhaps two or more bones of their own in the tarsus. Passing upwards we find the left leg and thigh much thicker than the

right, but in length the two sides are equal. The difference in size may be seen in the following measurements :—

	Right Side.	Left (abnormal).
The circumference of the upper part of the thigh measures	7½ inches.	9¼ inches.
" " " thigh just above the knee	6½ "	7½ "
" " " knee	5½ "	6½ "
" " " leg immediately below knee measures	5¼ "	5½ "

There does not appear to be any unusual development of bone, but there is evident muscular hypertrophy. When the knee is partly flexed a rigid cord or tendon may be felt in the position of the outer ham-string, passing back of the knee, where it stands out prominently beneath the skin, and is continued downwards behind the fibula almost as low as the os calcis. The left labium majus has been twice as large as the right ever since birth. During the mother's pregnancy nothing remarkable happened, nor has anything been discovered to account for this strange malformation. I would, however, briefly call attention to the fact of the occurrence of this double deformity on the left side, the right being normal. Dr. Little [1] has remarked that congenital club-foot, as well as the deformity occurring after birth from disease of the nervous system, attains oftener a higher grade on the left than on the right side. I have not had an opportunity of verifying this statement which refers to club-foot only, but I have observed a remarkable tendency in polydactylism to affect the left side more than on the right. The malformation is altogether confined to the left side in the case above reported, and in an analogous case of bifurcated or double hand described in the forty-sixth volume of the Medico-Chirurgical Transactions, page 29, we find the same peculiarity in a case [2] in which the left foot presented nine toes, but no deformity existed in the other. In the *London Medical Gazette* [1] a supernumerary toe is mentioned as occurring on the left side of the foot of a boy, other members of whose family were deformed in like manner. Mr. Sedgwick re-

1. Holme's System of Surgery, 1862, iii. 567.

ports [2] the case of a girl who had a complete supernumerary finger attached to the outer side of the first phalangeal joint of the left little finger; the child's father, paternal grandmother, and paternal aunt had precisely the same deformity. Another case [3] related by Mr. Sedgwick consisted of double last phalanx on the left thumb of a boy whose maternal grandfather's great-nephew had exactly the same deformity. We find mention [4] also of a boy presenting six toes on the right foot and seven on the left, his hands being similarly malformed. His mother, sister, maternal uncle, and maternal grandfather had the same number of toes and fingers. In Amsterdam a monster, drowned by its parents, had eight toes on the right foot and nine on the left, besides many other malformations. An extended search among the records has discovered many cases of supernumerary digits similar to those already cited, but only a single case [5] where the digits were more numerous on the right side than on the left. I infer, therefore, that polydactylism generally affects the left side in preference to the right.

Mr. Adams has remarked [6] that occasionally we observe an excess or deficiency in the number of toes associated with congenital varus. Tamplin [7] has made a similar remark, and has given an illustration of a case of double talipes varus in which the right foot presented a bud-like projection on the little toe, while the left had six well-developed toes. We observe the association of congenital varus and supernumerary toes in the case of bifurcated or cloven foot, and we now find a further relationship between these deformities, inasmuch as they each attain oftener a higher grade on the left than on the right side. Whatever may be a true explanation of these facts, they show an especial tendency to deformity on the left side of the body, the side known to be the weaker one in the great majority of men.—*Boston Medical and Surgical Journal.*

2. Transactions of the Pathological Society of London, ix. 427.

1 December 15, 1832, page 361.
2 British and Foreign Medico-Chirurgical Review, April, 1863, page 463
3 Op. cit., page 462.
4 London Medical Gazette, April 12, 1834.
5 Broadhurst on Deformities, 1871, page 57.
6 On Club-foot, page 210.
7 On Deformities, page 69.

CANADA

Medical and Surgical Journal.

MONTREAL, DECEMBER, 1875.

ACTION OF THE LARGE INTESTINE.

It has always been a matter of considerable interest to Physiologists, as well as to practitioners, to determine accurately the part played bythe large bowel in the digestion and absorption of food. The positive knowledge possessed on the subject has not been very great, the general opinion among Physiologists being that no active digestive process went on in this portion of the intestinal tract, but absorption of fluids continued as in the small bowel. Within the last few years several able papers have occurred on the subject in German periodicals, and the experiments made upon man and the lower animals, have all tended to confirm the above opinion. In one of the last numbers of Virchow's Archives (Bd. lxiv. Hft. iv.) Dr. Max Marckwald records a series of observations made upon a case that afforded the greatest facilities afforded on the human subject for obtaining definitive information on this point.

The patient, a man of 49 years of age, had suffered since childhood with a right scrotal hernia. Having become strangulated it was operated upon, but as a portion of the bowel presented a gangrenous appearance it was not returned, and in a few days sloughed away forming an unnatural anus in the region of the right groin. The anatomical situation of the fistula was ascertained to be in the cæcum probably at its junction with the ascending colon as by drawing out the lower portion, the ileo-cæcal valve could be

seen, through which the fæces flowed, and lower down the orifice of the processus vermiformis. The whole extent of a perfectly normal large intestine in a tolerably healthy man—for he had recovered perfectly—was thus completely isolated, and presented a much more favorable condition for experiments than had yet been afforded in the human subject. In previous cases of the kind only small pieces of the bowel, usually the lower part of the colon and rectum have been experimented upon. The general results of the experiments as regards digestion are as follows: neither outside the body, nor in the bowel itself, has the intestinal juice any action upon starch—it possesses no sugar forming ferment. Artificial digestion with the intestinal juice, and raw or cooked fibrine yielded negative results; similarly egg albumen was unaltered. Introduced into the intestines these albuminous bodies appeared to remain unchanged uutil the process of decomposition began, when small quantities of Peptones, Tyrosin and Indol could be detected. That these products, which also occur in digestion, were not due to any action of the intestinal juice was evident from the foul smell, the presence of Bacteria, and, moreover, no increase in the nitrogenous constituents of the urine ever occurred until after the lapse of forty-eight hours, when decomposition set in.

As regards the absorptive powers, it was found that water was taken up slowly, and better with small quantities at a time; at least twelve hours is taken for the absorption of 250 grm. of water. When in small quantities, Peptones were absorbed; in large and concentrated masses the mucous membrane was irritated, and Diarrhœa set up. Contrary to the observations of other experimenters soluble albumen was not absorbed in this case. No experiments were made on the absorption of fat, as the patient became refractory and left the Hospital. The results obtained in these observations settle the question as to any true digestive action in the large bowel. They are more satisfactory than many others, inasmuch as the whole

extent of the large intestine could be utilized, In the main they confirm the experiments of Czerny and Tatshenberger, recorded in one of the numbers of this journal for last year. These observers found in addition that fats if previously emulsified were absorbed. The practical conclusions to be deduced from these investigations is that in cases where recourse must be had to feeding per rectum, the materials employed as food, to be of any service must either first be submitted to a process of artificial digestion outside the body, or else be mixed with digestive fluids and then injected, in which case the artificial digestion would go on in the bowel, and the Peptones or other diffusible substances be absorbed as formed. Dr. Markwald does not believe that a patient who took absolutely nothing by the mouth could be nourished for any length of time per rectum; still many cases occur, especially in surgical practice, as after operation on the pharynx and œsophagus, as well as in some transitory diseases in the upper part of the digestive canal in which the use of nutritive enemata would prove of signal benefit. Mention is made of clysters of albumen with pancreatin as offering certain advantages but unfortunately no directions are given as to thier employment.

BILL.

An Act Concerning the Medical Profession of the Province of Quebec.

We devote much of our space, and have delayed the publication of this number of our journal, in order to give our readers a translation of a bill which was introduced before the Local Legislature of the Province of Quebec, on the 25th November ult., by the Hon. Mr. Chapleau. It does appear strange that a bill of this nature, which is in its bearing an act of revolution, should have got so far as to be introduced before the Legislature of this Province, without a single member of the Profession, except, indeed,

the promoters of the bill in question, having heard even of its existence. We do not believe that the Legislature of this Province will pass the bill, without its being fairly submitted to the members of the Profession, who are a corporate body, nor until an expression of opinion has been received from that body. A change of this nature, affect-the constitutional rights of an incorporated body of men like the Physicians and Surgeons of this Province, ought not to be hurriedly dealt with. If this bill should be passed into law, without being submitted to the various corporations whose rights and privileges will be seriously affected by its provisions, we fear the Legislature would be open to a charge of malfeasance.

We do not know who are the promoters of this bill. We have been told that some half-a-dozen or more medical men in this city, retained an attorney and had the bill drafted, and that it was then given to Mr. Chapleau, who understood that it emanated from a recognized body of practitioners in this Province. We may inform that gentleman that on the evening of Monday, 22nd November, a large and full meeting of the Profession was held in the rooms of the Natural History Society of Montreal. The object of that meeting was to consider the provisions of a bill which had been drafted by a committee of the College of Physicians and Surgeons, and which was to have been discussed at Quebec on the following day, at a special meeting of the College. Judge of the surprise of some of the members who attended the meeting at Quebec, held in the Laval University on the 24th ultimo, when they learned that a bill, which no person had seen or even heard about, was before the House, or about to be introduced.

We will not express any opinion concerning the bill, but simply submit it to the Profession, with an earnest hope that all will read it over carefully. We submit the bill to the Profession, in order that it may be freely and impartial-discussed. Any opinions that may be formed, provided

they are pertinent and within reasonable compass we shall cheerfully insert in our next number. We may observe, however, that this bill appears to lack conciseness and simplicity—but then, it was drawn up by an advocate! The gentlemen of the long robe are so accustomed to quibbling and being bothered in wordy argument by an antagonist, that in framing a law they endeavor to stop all gaps, so as to prevent, if possible, the proverbial coach and six being driven through their act unannounced. And, concerning the promoters of the bill, we may add that they need not have tried to do this thing in a corner; the bill is intended to be a Public Act, and before passing into law must become public property. We merely allude to the fact, as we hold that in matters of this kind, as in all other transactions, a manly, straightforward, honest and open way of dealing will not only command respect, but will be more likely to be attended with success.

BILL

An Act concerning the Medical Profession of the Province of Quebec :

Considering that it is expedient to repeal and amend the acts concerning the Medical Profession of the Province of Quebec; to this end, Her Majesty by and with the counsel and with the consent of the Legislature of Quebec, decrees as follows:

I. The physicians, authorized, at the time of the passing of the present act, to practice Medicine, Surgery and the Obstetric Art, in the Province of Quebec, shall form a civil corporation under the name of "The College of Physicians and Surgeons of the Province of Quebec," and the said corporation shall be divided into two sections as follows, to wit: one section for the old district of Montreal, comprising, also the old district of St. Francis; and one section for the old district of Quebec, comprising also the old district of Three Rivers and Gaspe.

II. The said corporation shall have power to prosecute and to be prosecuted in all the courts of justice of the Province of Quebec, to acquire property moveable and immoveable by purchase, gift, legacy or otherwise to the value of twenty thousand dollars; and each of the said sections shall have power also to prosecute and to be prosecuted separately in courts of justice of the Province of Quebec, under the name of "The College of Physicians and Surgeons of the Province of Quebec" section of Quebec (or Montreal), for all affairs concerning each of the said sections in particular, and to acquire property moveable and immoveable to the value of twenty-four thousand dollars.

2. All actions directed for or against each of the said sections respectively shall only affect the section concerned, and in the case of suits to be instituted against the said corporation or against any of the said sections, the notification delivered at the residence of the Secretary-treasurer of the General Council mentioned below, or at the residence of the secretary of the section interested, shall be a lawful notification.

3. The corporation, whose powers are exercised by the General Council, shall have power to prosecute each of the said sections of the college, to recover all sums due to the said corporation by such section, and if, on the report of the execution of the judgment rendered in such prosecution it has not been satisfied by the payment of the debt in capital and with the cost, the General Council convened for that purpose, shall have power to suspend such section until the payment entire and final of the amount due in capital with interest and costs.

In the case of suspension the members of the section thus suspended shall continue to pay their subscription into the hands of the secretary and treasurer of the General Council who shall administer the affairs of the suspended section, and the General Council shall be invested with all the powers, privileges and attributes pertaining to and conferred by the law on the said section till the causes of the suspension have ceased.

4. The said corporation and each of the said sections shall have a common seal bearing for inscription that of the Corporation: ("College of the Physicians and Surgeons of the Province of Quebec"), and for that of each of the sections; ("College of Physicians and Surgeons of the Province of Quebec,") section of

5. The members of the said Corporation shall not be personally responsible for the debts contracted by the Corporation or either of the said sections.

III. The Corporation shall have power to make the rules and regulations which it shall judge necessary for the interior discipline, and the honor of the members of the College,—to regulate the admission of aspirants to study or practice of medicine,—for the administration of its property,—to regulate a uniform tariff of fees for prescriptions, visits and professional attendance,—for all that relates to the general register and its publication, and to demand a fee from every member who shall ask the insertion of his name on the register after its publication,—to regulate the procedure in the case of suspension of a member of a section, in order that the General Council may have power to carry into effect the said judgment of suspension, and generally all the rules and regulations of a general interest for the Corporation and its members to assure their execution, which rules and regulations it shall have power to change, alter, modify and repeal whenever it shall deem expedient

2. These rules and regulations shall not be contrary to the dispositions of the present Act, and shall be transmitted on their passing to the Secretary of each section, and shall have the force of law, from the time of that transmission.

IV. The powers conferred on the Corporation by the present Act shall be exercised by a General Council composed of the President and the Vice-President, elected by each of the said sections, who shall name and choose from themselves a President, and shall choose also at their discretion from the members of the sections which they represent, a Secretary, who shall at the same time be Treasurer of the said General Council and shall form part of it.

2. The quorum of the said Council shall be three members.

SECTION COUNCILS AND THEIR OFFICERS.

V. The Council of each Section shall be composed of a President, a Vice-President, a Syndic, a Treasurer, a Secretary, and of eight other members for each of the Sections of Montreal and Quebec respectively; and the majority of each of the said respective Councils shall form a quorum, and all questions submitted to the said Councils shall be decided by the majority of the voices of the members present including the President.

VI. The first meeting of the Section Councils shall be presided over by the oldest Physician of the Section, by the date of his reception of such, then present, who shall have the casting vote; and all the other meetings shall be presided over by the President, and in his absence by the Vice-President, or in his absence by any other member chosen by the meeting.

VII. The election of the Section Council shall be made by ballot, the first Wednesday of July every year, unless this day be Sunday or a legal holiday, then the day following :—and the Council shall assume its duties immediately.

2. No such election shall take place if there are not at least thirty members of the Section present at the meeting, and in case, from want of a quorum, or from any other cause, the election cannot be held on the day fixed, it can be held at any other meeting specially called by the secretary, or in his absence by the Syndic, on the order of the president retiring, or on the requisition of ten members of the section;

3. The quorum of all the regular meetings of each section shall be fifteen.

VIII. A meeting of the section shall take place regularly every six months at the room of the Council of the Section on the days fixed by the regulations which the said Council respectively shall make;

2. Special meetings may take place and be called by the Secretary, or, in his absence, by the Syndic, on the order of the President, or on the requisition of ten members of the Section.

IX. The Section-Council shall put into execution, in the extent of their respective Sections, and independently of each other, the rules and regulations made by the General Council, and shall have power to make such rules and regulations as they shall judge necessary;

1. For the acquisition, disposition and management of the property of their respective Sections;

2. To regulate the time and place of meeting of the respective Sections and the manner of proceeding at them.

3. And generally all the regulations concerning the affairs peculiar to these Sections;

4. The said regulations shall not be contrary to the dispositions of the present Act, to any of the rules and regulations made by the General Council, nor to any law in force in the Province of Quebec.

X. The Council of each Section shall have, in and with respect to its Section, the power: Firstly,—For the maintenance of the discipline and the honor of the body, and according to the gravity of the cases, to pronounce by the voice of its President censure and reprimand, to any member guilty of any infraction of discipline, or of any action derogatory to the honor of the College, and to deprive such member of the deliberation voice and even of the right to be present at the meetings of the Section, for any term according to the discretion of the said Council, not exceeding four years, and shall have the power also, according to the gravity of the offence

to punish such member by suspension of his functions for any term at the discretion of the said Council, not exceeding five years, subject to appeal to the General Council only such as prescribed below;

Secondly.—To prevent, conciliate and regulate all difficulties between the members of the Section, concerning professional matters;

Thirdly.—To prevent, hear, conciliate, regulate and decide all complaints on the part of third parties against the members of the College of such section, having for their object professional duties and matters, and which would react in a derogatory manner to the honor or contrary to the discipline of the college.

Fourthly.—To admit on the report of Boards of Examiners, aspirants either to the study or to the practice of medicine, and to decide on their capacity and morality.

Fifthly.—To represent the members of the college, at all times that the interests or duties of the profession necessitate it.

XI. The Secretary of each Section shall report carefully the deliberations and proceedings of the meetings of the council of the section, of which he shall keep a minute in a book for this purpose; and he shall be the guardian of the archives of his section, which shall be deposited in a safe place, determined by the Council of each Section;

2. He shall deliver the records, certificates and other papers which may be required, and such records, signed and certified by the Secretary, and sealed by the seal of the Section, shall be admitted and received as authentic evidence in all the Courts of Justice in the Province of Quebec.

XII. The Treasurer of each Section shall hold the cash of his Section; shall receive and pay all the sums of which the receipt and expenditure are authorized, and shall render account of his administration every year at the meeting held for the election of the Council, and at any time that it shall be required by the Council.

XIII. In case of absence, sickness or death of any of the officers of the Council, they shall be replaced as follows: The President by the Vice-President, and the Vice-President by the oldest member of the Council, according to the date of his admission into the profession, and the other officers shall be temporarily chosen by the Council, and in case of absence, sickness or death of any of the members of the Council, the Council shall have power to replace them in the same manner, by as many other members chosen from the members of the section.

XIV. The President of each section shall have the right to vote, and also shall have the casting vote in all the meetings and deliberations, either of the council or of the members of the section; the President and Vice-President of each section shall have power to call special or extraordinary meetings at any time that he shall judge it proper; he shall scrupulously look after the keeping of the rules and regulations, and the maintenance of order at the meetings; he shall have power to call to order those who are out of order and even to reprimand them.

MEETINGS OF THE GENERAL COUNCIL.

XV. In the months which shall follow the Annual Elections of the Section-Councils, the Presidents and Vice-Presidents of these councils shall meet alternately at Montreal and Quebec, the first meeting being held at Montreal, to choose from themselves the President, and from the members of the different sections, the Secretary-Treasurer of the General Council of the Corporation, and also to make the rules which they are authorized to make by the third Section of the present Act

2. The quorum of the General Council shall be the majority of the said Council, and every question brought up shall be decided by the majority of the members present.

XVI. The duties of the Secretary-Treasurer of the General Council shall be, with respect to the General Council and Corporation, analogous to those of the Secretary and Treasurer of each section with respect to their section; and all records of minutes of proceedings of the said Council, certified by the Secretary-Treasurer of the Council under the seal of the Corporation, shall be received as authentic evidence in all the courts of this Province.

XVII. The President of the General Council shall have the right to vote and shall also have the casting vote in all the deliberative meetings of the General Council,

ACCUSATIONS AGAINST MEMBERS OF THE COLLEGE.

XVIII. In all cases in which a member of the college is accused of any offence and of any contravention of the dispositions of the present act before the Council of the section to which he belongs, the accusation shall be decided as to his being guilty or not guilty by the absolute majority of the members of the Council of the Section,

XIX. The manner of procedure in all accusations brought by the Syndicate is as follows:

2. Each time that the Syndic may receive on the oath of one or several trustworthy persons (an oath which he shall administer), a complaint against one of the members of his section, affecting the honor, dignity, interests and duties of the profession, he shall without delay submit the said complaint to a meeting of the Council, specially convened for this purpose, and if the Council judge that there is matter for investigation, it shall order the trial of such member;

3. The Syndic shall then write out the accusation in the form of schedule No. 2, here annexed, which shall be sent to the Secretary, who shall have a copy made of it which he will certify, and send to the accused, with an order in the name of the President of the Section, commanding the accused to appear in person before the Council on the day, place and hour fixed in the said order;

4. The notification of trial and order to appear, shall be made through the agency of the bailiff of the Superior Court, and the said bailiff shall report on his oath of office such notification;

4½. It shall not be necessary for the accused to appear;

5. All the proceedings relative to the accusations brought before the Section Councils as above mentioned, shall be by writing, and at the time of the examination of the respective parties, these last shall be obliged to furnish a clerk to take detailed notes of the evidence heard, which notes and proceedings and every copy of them shall be received as authentic testimony before the General Council and in all the courts of justice of the Province of Quebec, and all these papers shall be united in one bundle, so as to be sent to the General Council in case of appeal, and to be sent back to the Section Council after the final judgment;

One or several members of the Section Council shall have power to receive evidence in any case, and all objections to the evidence or to part of it, shall be reserved or determined by the said member or members sitting, subject to revision by the said Section Council.

Commissioners of Enquiry chosen from the members of the profession may be named by the Section Council in any part of this Province, within

ten leagues of the limits of the section in which an accusation is pending, to receive evidence for any such accusation, and the said Commissioners shall have for this purpose the same power as is conferred on the President and in the members of the Section Council, including the power to summon witnesses, and in case of their refusal to report it to the President in order that this last may proceed against the witness.

Every member accused shall have power, if he judge proper, to offer his own evidence on the complaint made against him.

6. The General Council shall determine by its regulations the manner in which the proceedings relative to the accusations shall be conducted before the Section Councils.

XX. Each Council shall have the right to require, by subpœnas in the form of the schedule No. 4, annexed, in the name of the President, under the seal of the Section, and signed by the Secretary, the presence of witnesses before it, and it shall have the same powers to compel them to affix and give their depositions as the Civil Courts of the Province of Quebec have; and the subpœnas or other processes required in virtue of the present Act, shall be delivered by the bailiff of the Superior Court; and every President or other person presiding over the Council during the trial, shall have the same power to impose fines on the witnesses for not appearing, and to order imprisonment as for contempt of Court, as any Judge in any Court of Justice in the Province of Quebec.

XXI. The Secretary, or any other member of the Council of the Section shall administer to the witnesses, or to any other person, all the oaths required by the present Act; and any person guilty of false declaration, in any oath required by the present Act, shall be guilty of perjury and punished by the penalties established by the law against perjury.

XXII. Any member accused as above shall have power to defend himself by counsel or solicitor.

XXII½. The council shall establish by the judgment to be rendered in the said trial, which partly shall pay the costs, and shall have power to divide them or accord them to either party and shall settle the amount of them. The party to whom the costs shall be accorded, shall have this judgment registered in the registers of the Superior Court of the district in which the condemned party resides, paying one dollar to the prothonotary for that and on production by the said party of a præcipe, under the signature of the syndicate of the Section whose council has heard the complaint, there shall issue from the said Superior Court in the ordinary manner, a brief of execution, not only for the costs thus accorded, but also for the costs of execution and for the fee paid to the prothonotary as above mentioned. The party in whose favor the costs shall be thus accorded, shall have furthermore the rights to all the costs occasioned after the execution, and shall have power to recover them in the same manner as above prescribed. There shall be in like manner judgments rendered on the appeals brought before the General Council, provided always that the corporation of the College be not held accountable for these costs any more than the Sections.

XXIII.—Any member accused who shall consider himself wronged by the judgment, final or interlocutory, which the section-council shall pronounce on the occasion brought before it, shall not have the power to appeal otherwise than before the General Council, in the manner prescribed below, and no judgment of the Council of one of the sections rendered in virtue of the present act, shall be annulled by any other way than by the appeal mentioned in this Act.

2. In order to obtain this appeal, the wronged member shall deposit,

within thirty days of the pronouncement of the judgment, in the hands of the treasurer of the section-council, fifty dollars, which sum shall be returned to the member soliciting the appeal, if the judgment of the council is annulled or modified with the costs, but otherwise it shall pay the costs which the appeal will occasion according as it shall be determined by the judgment rendered on the said appeal, and no papers shall be sent to the secretary-treasurer of the General Council unless the deposit above enacted shall have been made, and the notice of appeal be duly given to the secretary of the Council of the section which has pronounced such judgment, and no notice shall be received before the deposit has been made; in case the appeal shall not have been lodged within thirty days of the judgment, such judgment shall be put into execution without delay.

3. The notice of appeal and the deposit shall have the effect of obliging the Secretary or any other officer of the Council of the Section which has pronounced such judgment, to send immediately to the Secretary Treasurer of the General Council, the papers of the accusation brought against the appealing member, with the notice of appeal, the certificate of the deposit, as well as the processes and copies of all judgments and orders in the case, and the Secretary-Treasurer of the General Council shall immediately place the case in appeal;

4. After the receipt of the papers the Secretary-Treasurer of the General Council shall deposit in Her Majesty's Post-Office, free of postage, a notice of such appeal, and of the day fixed for its hearing, which hearing cannot take place before the expiration of fifteen days after the deposit of the said notice in the post; this notice shall be addressed to the member appealing, and to the Presidents and Vice-Presidents of all the Sections of the College, requiring them to be present at the day, place and hour indicated;

5. In the case of absence, sickness, or death of any of the Presidents and Vice-Presidents of the said Sections, two of the oldest members of the Council shall replace them, and the Secretary of the said Section shall deliver to these members the full power to act in the place of the President and Vice-President not acting;

6. The members of the General Council before whom the appeal shall be lodged, or the majority of them, shall have power to confirm, annul, or modify the judgment, either on account of error in the judgment, or in any interlocutory judgment or order rendered in the case, and they shall have power to pronounce the judgment which ought to be and to adjudge the costs, and in the case of judgment pronouncing suspension, to fix the date at which such suspension shall commence; and their judgment as well as the papers of the case shall be immediately returned to the Secretary of the Section from which the papers had been received, and this judgment shall be immediately registered by the Secretary and shall be considered as the judgment of the Council of the Section, just as if it had been rendered there at first;

7. A tariff of fees, payable to the members of the General Council, shall be made by the General Council, which shall determine by whom such fees shall be paid.

XXIV. In the case of suspension of a member of a Section, the Secretary of that Section shall give notice of it to the Secretary of the other Section and such member thus suspended shall not be allowed to practise in the Province of Quebec, during the term of such suspension, mention shall be made of his suspension in the General Register and in the register of the Section to which he belongs.

XXV. Any member of the Council who absents himself from any of the meetings of the said Council, without legitimate cause, shall incur a fine of one dollar for each such absence.

EXAMINATION,—ADMISSION TO STUDY OR TO PRACTICE.

XXVI. Each Section Council shall have power to make every regulation for the examinations for the study and for the practice of the profession of medicine, shall name in eight days after the general elections, a committee of 25 members of the College, of more than five years practice as physicians and not owing any arrears of subscription or other dues, and who shall not be members either of the said General Council, or of the Section Council, to examine the aspirants to the study or to the practice of the profession; this committee shall have power at each session for the examinations, to divide themselves into as many sub-committees as shall be necessary, of which not less than three members form the quorum whose duty shall be;

Firstly.—To enquire into the knowledge, capacity and character of the aspirant to the study of the profession, who shall present himself before such committees and to report to the Council of the Section which, if the report be favorable, shall give to such aspirant a certificate of his admission as aforesaid, under the signature of the President counter-signed by the Secretary, and under the seal of the Section, and in the contrary case, such aspirant shall only be allowed to present himself for a subsequent examination: it shall be the same for the aspirant to practice;

Secondly.—To examine any aspirant to practice, as to his medical knowledge and qualifications, and to enquire into his morality and the regularity of his course of study; and it such aspirant be judged to be capable and qualified, and if it be ascertained that he has conformed in every respect to the dispositions of the present act, the President of the Section, on the report which shall have been made to him in writing, shall accord a diploma of admission to the profession; which diploma shall be in the form of Schedule No. 1 annexed, and shall suffice to give to him, who shall have obtained it, the right to practice as physician and surgeon in the Province of Quebec, on the said aspirant who is thus admitted, taking a faithful oath to fulfill his professional duties; and this oath shall be administered by the Secretary of the Section who shall make mention of it in the diploma;

2. The said diploma shall be registered in the registers of the Section which has delivered it, as well as in the registers of the General Council, and the parties who obtain the diploma shall pay for each such registration the sum of one dollar;

3. Notice by writing shall be given to the Secretary of the Section, at least a month in advance, by the aspirant, that he intends to present himself for admission to study or practice, which notice shall be posted by the Secretary in the place where the meetings of the Section are ordinarily held, with mention of the day on which the examination of such aspirant shall be held;

4. The meetings for examination for the study or practice of the profession shall take place on the day and hour and in the place fixed by the regulations of the respective Sections, provided that such meetings be held once at least, every six months, and if such examination cannot take place or be finished on the day fixed, it shall be in the power of the committees for examination to adjourn from day to day till the examination of all the candidates be finished.

XXVII. No one shall be admitted to an examination for the study or for the practice of the profession, unless he has lodged in the hands of the Treasurer of the Section-Council the sums mentioned below, and no one shall be admitted to the study of the profession unless it appears to the committee which shall be appointed to enquire into the qualification of the candidate, that the candidate possesses sufficient knowledge of the English and French languages, and of the Latin language, and that he has received a liberal education in the sense of the dispositions prescribed below, and such candidate after having received the certificate mentioned in Section twenty-six, shall register his license, passed before notaries, in a register kept for this purpose by the Secretary; for such registration he shall pay one dollar for the certificate of such registration; and the time of the course of such student shall only count from the day of such registration;

2. The liberal education required for admission to the study of medicine shall comprise a complete course of classical study, as follows: Latin elements, syntax, literature, rhetoric and philosophy or any other complete course of classical study taught in colleges, seminaries or incorporated universities;

3. And any candidate to the practice or study of the profession who has been or shall be twice refused on account of immorality or bad character shall not be allowed to present himself as such again.

XXVIII. None shall be admitted as physician and surgeon, without having attained the age of twenty-one years, having been regularly to study according to the disposition of the preceding Section having studied regularly and without interruption as apprentice or student with a physician for four consecutive and entire years, and having followed a regular and complete course of lectures in a university, college or incorporated school of medicine, in which such course of lectures on medicine, and surgery is established (such course subject to the dispositions below), and taken a degreein medicine, in such incorporated university or college, and this course of lectures in medicine and surgery shall have to be followed at the same time as the student will serve his time of study under indenture with a practising physician, and these facts shall be established by the indenture of apprenticeship, the certificate of his patron and the diploma or certificate conferring the degree.

2. The General Council shall have power from time to time, to demand from all the universities, or all incorporated colleges or schools of medicine in which they shall have pretended to establish such courses of medicine and surgery, a report indicating fully the detailed programme of this course of lectures in medicine and surgery, and it shall have the power, through the *Official Gazette* of the Province of Quebec, to declare that it approves it if it is judged sufficient, or it shall have the power to report to the Lieutenant-Governor, giving previous intimation to the party interested, and to demand and obtain an order in Council prescribing such other programme as the Lieutenant-Governor in Council shall judge proper, which order shall be published in the said *Official Gazette*, and no diploma or degree in medicine shall be valid in virtue of the present Section unless it be accorded conformably to the requirements of this Section.

XXIX. No candidate shall be admitted to practice in a Section in which he shall not have studied; and if he has studied partly in one Section and partly in another, he can only be admitted in the Section in which he has studied for the last six months of his course and he shall have to produce a certificate of study from the Council of the Section in which he has made part of his course which will be given to him by the President under the seal of the Section, and he shall pay a fee of one dollar for such certificate;

2. If such candidate has been refused before a Section, or if his examination is continued, he cannot present himself immediately for examination nor be admitted to practice before any other Section than this before which he has already been examined, unless he has studied for six months since his last examination in such Section.

XXX. Nothing in the present act shall be prejudicial to the right of such student or of such person to be admitted to the practice of the profession or to claim any exemption or privilege acquired under the authority of any act in force before the present act, and any person desiring to present himself for the practice of the profession shall have power to do so at the most distant term from his course of study but he shall only obtain his diploma after his course shall have been finished entirely.

XXXI. The Secretary of each Section shall keep a register in which the names of all the students who have registered their admission, with the date of their registration, shall be written in order of date, and in which he shall write also, but separately, the names of all the members of the profession of the Section, with the date of their admission, who do not owe any arrears of subscription, and who have paid their annual subscription which has expired the first Wednesday of the July preceding;

2. And no one shall have power to practise in the Province of Quebec if he has been or if he is, or if he is going to be convicted of felony or of any other infamous crime, and by such conviction he shall lose the privileges which his diploma accords to him, and any money obtained by him to account for such conviction as physician aud surgeon shall be considered to have been obtained by this person under false pretences, which shall be subject to the disposition of the law in such a case;

2. The Clerk of the Crown for the Criminal Court which shall have pronounced such conviction, shall inform the Secretary of the Section in which such physician was practicing, of felony or any other infamous crime, or if any of the offences mentioned in the twenty-sixth section of the ninety-second chapter of the Revised Statutes of Canada, in order that the name of such physician may be struck out of such register; and the Secretary of such section shall send to the Secretary-Treasurer of the General Council the name of the physician thus deprived of his privileges, in order that it may be struck out from the general register.

XXXII. The following fees shall be paid, besides the fees above mentioned, to the Treasurer of each section, and that before the examination of any candidate shall take place for the study or for the practice of the profession, to wit: For each certificate of admission to the study of the profession, twenty dollars; for each diploma, fifty dollars; and all sums received on the account of the Section shall be lodged in the treasury of the Section;

2. The following fees shall be retained by the Treasurer and lodged in the treasury of the Section in case of refusal of admission either to the study or to the practice of the profession, to wit: For admission to study, five dollars; for admission to practice, ten dollars; the Treasurer of the Section shall return the balance to the rejected candidate.

XXXII½. Any person who has been duly named member of, or who has been admitted to the College of the Corporation, University or School of Medicine, duly incorporated and having power to accord diplomas in any country, in which the same privileges shall have been accorded to the physicians and surgeons of this Province, and who produces sufficient proof of his nomination or admission, to wit, a certificate of proper life and character, to the satisfaction of the Council of the Section before which such person presents himself, and who submits to an examination on his

medical knowledge to the satisfaction of the Council, shall receive a diploma giving him the right to practice as physician and surgeon in this Province.

ANNUAL SUBSCRIPTION FROM THE MEMBERS.

XXXIII. Until the Section Council shall have made other rules, each member shall pay in each Section, annually, on the 1st of May, into the hands of the Treasurer, the sum of six dollars, which shall be lodged in the treasury of the Section;

2. And the members of the College paying such annual contribution shall have the use of the library and of the books of their Section, subject only to the rules which the Council of the Section shall have power to establish for the management of the said library: and the said Council is for the present authorized to estsblish rules and to change them from time to time, as it shall judge proper to increase the said subscription, for other objects;

3. Any member who neglects to pay the annual subscription or any part of it, or any other due legally imposed by the Council of the Section, shall lose the right to vote at all and each of the meetings of his Section, so long as he shall remain thus indebted;

4. Any member desiring not to practice the profession of medicine shall be able to relieve himself from the payment of such subscription during the whole time that he shall cease thus to practice, by paying previously all arrears due frem him and by giving information in writing of his intention of not practising, to the Secretary of the Section to which he belongs, who will inform the Secretary of the General Council, and the fact that such member has ceased to practice shall be ascertained from the particular register of the Section, and such member shall no longer have power to reenter upon the practice of his profession, and any fee received after such notification shall be considered to have been received under false pretences, and the physician shall have to be subject to the dispositions of the law regulating false pretences, unless he has previously notified the Secretary of the Section of his intention to practice anew, and such notification shall also be registered in the said registers, and after such notification, such member shall continue to pay the annual subscription.

XXXIV. The Section Councils shall have power to name, every year, a Committee of not less than five members, who shall be chosen from the members of the respective Sections, whose duty shall be to superintend the library of said Section, to take it under ther care, and to make regulations concerning its management.

TREASURY OF THE SECTIONS.

XXXV. The treasurers of the different Sections shall make every year, on the first of May and each time that it shall be required by their Sections, an exact report of the receipts and expenditures of their Section.

XXXVI. The Council of each Section shall examine each time that it shall judge proper the accounts of its Treasurer, and no expenditure shall be made without the authority of the Council, signed by the President unless the Section in meeting has ordered it.

XXXVII. All fines and subscriptions imposed in virtue of the present act, and conformably to its dispositions, shall be recoverable with costs, before any court of justice having civil jurisdiction in the district in which the defendant resides, on a simple certificate from the President counter-

signed by the Secretary of the Section, and it shall suffice, in the declaration for recovering such subscriptions or fines, to state the sum demanded to mention in it in a summary manner the period during which such fines have been incurred or such subscriptions have become due, without stating the case or the particulars.

XXXVIII. No omission on the part of the Section Councils, to meet,—and no default on the part of any Section to proceed, for the election of its Council and officers should prevent the other Section from proceeding in virtue of the present act, as far as the Sections are concerned, shall not cause the dissolution of the corporation nor of any such Council.

XXXIX. The twenty-sixth Chapter of the Statutes passed in the tenth and eleventh years of the reign of Her Majesty, entitled "Act to incorporate the members of the Medical Profession in Lower Canada and to regulate the Study and practice of Medicine and Surgery in it," and the fifty second Chapter of the Statutes passed in the twelfth year of the reign of Her Majesty, Entitled: "Act to amend the act to incorporate the members of the medical Profession in Lower Canada, and to regulate the Study and practice of Medicine and Surgery in it," are for the present repealed, but all processes, matters and things, adopted and accomplished in virtue of the said Act or of any of these Acts, shall remain and continue to exist as if such repeal had not taken place, and as long as the thing shall be necessary, shall be continued, followed and accomplished, in virtue of the present Act.

XL. The disposition of the present Act shall only apply to the students actually under apprenticeship as far as concerns the mode of examination of candidates to practice, such as provided by this Act.

XLI. The powers, privileges, and prerogatives conferred on the Government of the College of Physicians and Surgeons of Lower Canada, in existence at the time of the passing of the present act shall be in as far as they are not contrary to the dispositions of the present act, transmitted, conferred on and exercised by the General Council, and all the Archives, papers, documents, books, or other movable effects belonging to the said College shall become the property of the said General Council and it shall be the duty of the President and of the Secretary of the said College, to put the President and Secretary in possession of the said archives, papers, documents, or other movable effects.

XLII. The powers, privileges and prerogatives of the physicians and surgeons, belonging to the college of physicians and surgeons of Lower Canada, in virtue of the act now repealed in as far as these powers, privileges and prerogatives are not contrary to the dispositions of the present act shall remain attached to the title of physician and surgeon conferred before the passing of the present act.

REGISTER OF THE MEMBERS OF THE COLLEGE.

XLIII. The names of the members of the said Corporation shall be inscribed in a general register kept by the General Council, and the Secretary of each Section shall also keep a similar register, containing the names in full with the residences of each such members of his Section, as provided above;

2. The General Register shall be published every year, in the month which shall follow the elections of the General Council and shall contain only the names of the members of the said Corporation who have paid the annual subscription up to the first of July proceeding, and all arrears which should be due on the certified report which the treasurer of each Section shall make to the Secretary-Treasurer of the General Council in

the fifteen days which follow the General Elections; but this register may be amended, after the regulations of the General Council conformable to the powers conferred on it by the present Act;

3. None shall be allowed to practice as physician and surgeon in the Province of Quebec, if his name is not inserted in such general register thus published;

4. Any writing of a medical prescription, and any sale of poisons or other injurious liquids or substances made on the order of any person whose name is not inscribed in such general register, thus published, shall be considered to have been made by a person not qualified to practice as physician and surgeon;

5. Any person whose name shall not be inscribed in the general register and shall have no right to be there inscribed, shall not have power to indemnify himself for attendance, visits, treatment or prescriptions given by him, and any money received by him for such shall be considered to have been obtained under false pretences and shall render such person subject to the disposition of the common law about false pretences;

6. Any physician or Surgeon, who shall have the right to practice as such, but whose name shall have been omitted in the General Register, for some cause or other, shall apply directly to the Secretary-Treasurer, and on the certificate of the treasurer of the Section to which such physician or surgeon belongs, he shall obtain from the General Council, under the signature of the Secretary-Treasurer of it, a certificate which shall serve in place of the inscription of his name in the general register. and shall have the same advantages, privileges and prerogatives as such inscriptions;

7. Until the General Council has made rules on this subject, any person shall have the right to a certified copy of the General Register printed, by paying into the hands of the General Council a fee of fifty cents; and such copy printed and certified of the said register shall be *prima facie* evidence before any Court of justice of the Province of Quebec.

CAMPBELL'S NORWAY COD LIVER OIL.

We, with much pleasure, recommend this excellent preparation. This oil is superior in appearance to the finest samples of the ordinary Cod Liver Oil. It is stated that Cod fish on the Norway coast are in a much healthier condition than those on the American shores; the makers of the oil are more skilful and careful, and they select only sound and fresh livers. The result is apparent in the pale yet brilliant appearance of the Norway Oil. It has no disagreeable odor, its taste is bland and pleasant, and is readily taken by children and invalids. It can be easily known by the peculiarity of not freezing at temperatures which solidify ordinary Cod Liver Oil.

We have been requested to give publicity to the following announcement, and we trust that Canada will not be behind other countries in sending representative men to attend this very important meeting:

AMERICAN CENTENNIAL CELEBRATION.

INTERNATIONAL MEDICAL CONGRESS.

The Medical Societies of Philadelphia, animated by a just spirit of patriotism, and an earnest desire to unite with their fellow-citizens in celebrating the Centennial Birthday of American Independence, have taken the initiatory steps for the formation of an International Medical Congress by the appointment of delegates from their respective bodies, who were empowered to organize and perfect a scheme for the above purpose. In accordance with the authority thus given the delegation has organized The Centennial Medical Commission, with the following officers: President, Samuel D. Gross, M. D., LL. D., D. C. L. Oxon; Vice-Presidents, W. S. W. Ruschenberger, M. D., U. S. N.; Alfred Stille, M. D.; Recording Secretary, William B. Atkinson, M. D.; American Corresponding Secretaries, Daniel G. Brinton, M. D., William Goodell, M. D.; Foreign Corresponding Secretaries, Richard J. Dunglison, M. D.; R. M. Bertolet, M. D.; Treasurer, Casper Wister, M. D. Arrangements have been made for the holding of the Congress in the City of Philadelphia to begin on the 4th and to terminate on the 9th of September, 1876. The Commission propose the following general plan for the organization and business of the Congress:

I. The Congress shall consist of delegates, American and foreign, the former representing the American Medical Association and the State and Territorial Medical Societies of the Union; the latter the principal medical societies of other countries.

II. The officers shall consist of a President, ten Vice-Presidents four Secretaries, a Treasurer and a Committee of Publication, to be elected by the Congress at its first session, on the report of a Committee of Nomination.

III. The morning session of Congress shall be devoted to general business and reading of discourses; the afternoons to the meetings of the Sections, of which there are nine, viz.:

1. Medicine, including pathology, pathological anatomy and therapeutics.
2. Biology, including anatomy, histology, physiology and microscopy.
3. Surgery.
4. Dermatology and syphilology.
5. Obstetrics and diseases of women and children.

6. Chemistry, toxicology and Medical Jurisprudence.
7. Sanitary science, including hygiene and medical statistics.
8. Ophthalmology and Otology.
9. Mental diseases.

IV. The language of the Congress shall be the English, but not to the exclusion of any other language in which members may be able to express themselves more fluently.

Gentlemen intending to make communications upon scientific subjects will please notify the Commission at the earliest possible date, in order that places may be assigned them on the programme.

In order to impart to the Congress a thoroughly international character invitations to send delegates will be extended to all the prominent medical societies in Europe, Mexico, the British Dominions, Central and South America, the Sandwich Islands, the East and West Indies, Australia, China and Japan. Invitations will also be rendered to medical gentlemen of high scientific position; and distinguished visitors may be admitted to membership by a vote of the Congress.

Among the advantages arising from such a convocation as this, not the least important will be the opportunity afforded its members for the interchange of friendly greetings, the formation of new acquaintances and the renewal and cementing of old friendships.

The Centennial Medical Commission tender in advance to their brethren in all parts of the world a cordial welcome, and a generous hospitality during their sojourn in the "Centennial City."

The Congress will be formally opened at noon, on Monday, the fourth day of September, 1874.

The registration book will be open daily from Thursday, Aug. 31, from 10 to 3 P. M., in the Hall of the College of Physicians, N.E. cor. of 13th and Locust Streets. Credentials must in every case be presented.

Gentlemen attending the Congress can have their correspondence directed to the care of the College of Physicians of Philadelphia, N. E. corner of Locust and Thirteenth Sts., Philadelphia, Pennsylvania.

There is every reason to believe that there will be ample hotel accommodation for all strangers visiting Philadelphia in 1876. Further information may be obtained by addressing the Corresponding Secretaries.

All communications must be addressed to the appropriate Secretaries.

WILLIAM B. ATKINSON, 1400 Pine Street, Philadelphia, *Recording Secretary.*

DANIEL G. BRINTON, 2027 Arch Street.
WM. GOODELL, 20th & Hamilton Sts. } *American Corresponding Secretaries.*

RICH. J. DUNGLISON, 814 N. 16th St.
R. M. BERTOLET, 113 S. Broad Street. } *Foreign Corresponding Secretaries.*

PHILADELPHIA, October, 1875.

CANADA

MEDICAL & SURGICAL JOURNAL.

ORIGINAL COMMUNICATIONS.

Case of Lithotomy, Followed by Renal Abscess and Death. Autopsy. By J. T. Finnie, M.D., L.R.C.S., Edin.

(Read before the Medico Chirurgical Society of Montreal.)

The following case of stone in the bladder first came under my care in the summer of 1874. The subject, the son of Mr. W.,——was three and a half years old. Had been a weakly child from infancy, not having walked until two and a half years old. Was subject to frequent attacks of diarrhœa, stools invariably of a light colour and highly offensive. Coupled with this there existed a peculiar fragile condition of the bones, indeed so much so, that an ordinary fall or twist would result in fracture or separation of the epiphyses. During the space of twelve months I was called on five different occasions to set fractures of either the right or left arm. The child's appetite has, as a rule, been good, at times voracious.

The first symptoms of stone manifested themselves by pain in the region of the bladder, frequent micturition, and pain at the glans penis, made apparent from his frequently grasping and stretching it to relieve the pain. From these symptoms and the general condition of the child I at once suspected *stone.* On making known my suspicions to Dr. Fenwick he kindly consented to meet me, gave the patient chloroform and explored the bladder. We however failed to detect any stone.

In the meantime I prescribed the mineral acids and change of air, with apparently some benefit, as the symptoms

subsided very much. Several months after, however, the patient relapsed iuto a condition worse than before. Great pain in making water, especially at the close of the act of micturition, urine muddy with sediment of thick muddy mucus. I again passed a No. 3 sound, but could discover nothing. Twice at long intervals the operation was repeated, but always with the same result.

As the symptoms continued, and became urgent, I was positive that nothing but the presence of a *stone* could cause so much disturbance. I got Dr. Ross to accompany me, Sept. 25th, and having anæsthetised the patient, we made a thorough examination of the bladder, and at last detected a *calculus*, being made aware of its presence only by contact and friction. The distinct metallic ring that usually follows the stroke of the sound was absent, from which we inferred that the stone was a soft one. Being certain that a stone existed, I decided to operate as soon as possible.

On Thursday, September 30th, I called to my assistance Drs. Ross, Roddick, Rodger and Alloway, Dr. Fenwick being unavoidably absent.

Chloroform having been administered, I proceeded to operate. First passing No. 5 staff, and giving it in charge of Dr. Ross, I commenced my incision at the raphé, midway between the scrotum and anus, plunging the knife at once down as far as the staff, and in withdrawing it, cutting obliquely downwards and outwards as far as a point midway between the *tuber ischii* and *anus*.

Inserting my left forefinger as far as the staff, it served as a guide in introducing the knife, to make the second incision, through the prostate and neck of the bladder. Here I experienced the first and only difficulty in the whole operation. Having passed my finger into the bladder the staff being removed, I could with an effort just touch the stone,—and having introduced the forceps—in my efforts to grasp the stone, I invariably included a fold of the bladder. After repeated attempts I withdrew the forceps with the object of using the scoop instead. In the spoons of

the forceps I found a small calculus, together with a large quantity of soft phosphatic material, which I found to be part of the thick deposit of phosphate, covering the fundus of the bladder. This deposit was removed with the scoop, as well as two more stones, which were very soft, purely *phosphatic*, the whole weighing two drachms. Being satisfied that all had been removed from the bladder I washed it well out with lukewarm water, and the patient was removed to bed, while yet under the influence of chloroform. Half an hour after the operation the pulse was 135; temperature 100°. Woke up for a few moments, got a drink of milk and water, and fell asleep again.

9. P.M.—Pulse 130; temperature 100°. Everything going on satisfactorily. Has taken some beef tea. Urine trickling through the wound, bringing with it some *phosphatic debris*. Wound looks well. Has no pain.

Oct. 1. Patient passed a quiet night. Has no pain. Slept well; pulse 125°; temperature 100°. Bowels somewhat relaxed. Prescribed half a drachm of the Fld. Extract Rubus Villosus, every three or four hours.

Oct. 2. Continues to do well. Wound healthy-looking. Slight discharge of pus. Nourishing well. Pulse 120.—Temperature 99°.

Oct. 3. Diarrhœa troublesome; again changed the medicine to P. Cretæ co. c. Opio. gr. v., every four hours. Free discharge of pus from wound. Sleeps well.

Oct. 4. Bowels not so relaxed. Patient quite playful. Pulse 124°; temperature 99.

Oct. 8. Patient doing well; urine still passing by the wound; free discharge of pus. No signs of its closing; Injecting the wound with solution of Carbolic Acid, 1–30.

Oct. 12. Patient greatly improved; eats well and sleeps well. Micturition performed partially by natural passage. The wound, however, seems as large as ever, and discharges freely.

Oct. 18. Passes water entirely by natural passage, but externally the wound is not healing. No vitality about it;

injected a strong solution of *argent nit.* into the wound to-day, 20 grains to ounce.

Oct. 25. Patient remains much as he was ; no improvement in the appearance of the wound. Still injecting the solution of nitrate of silver ; eats well and sleeps well. Bowels every other day became relaxed ; stools exceedingly offensive.

Nov. 1st. Patient much changed to-day. Pulse 140 : temperature 102°. Hectic flush on the face ; lost his appetite ; bowels very loose. Wound discharging pus profusely.

Nov. 2. Little better to-day. Diarrhœa arrested. Pulse 142 ; temperature 101½. Sordes on teeth ; tongue coated with thick white fur.

Nov. 3. Patient seems improved ; is eating a little to-day ; but he is greatly changed, the emaciated body and pinched appearance of the countenance all bespeak some serious trouble. In detailing to Dr. Ross the change that had come over my patient, he suggested that there might be some kidney complication ; but it was impossible to get any of his urine, as he invariably passed it in bed.

Nov. 8. Patient much emaciated ; bed-sores over sacrum ; diarrhœa ; eats nothing ; takes a little port wine and milk ; evidently sinking fast.

Nov. 14. Patient died to-day.

Autopsy.

Thirty-six hours after death, together with Dr. Rodger, I made a *post mortem* examination of the body. Extreme emaciation. On opening the abdominal walls nothing unusual presented itself. Bowels natural ; no sign of any inflammatory action. Spleen, normal.

Right Kidney very much enlarged ; general appearance pale and preternaturally soft to the touch. Dividing it, we found the cortical substance twice its normal thickness and pale ; obliteration of the pyramids. Pelvis much enlarged, and a large calculus imbedded at its lower part, the remaining portion being filled with thick yellowish pus and

calcareous particles. The whole forming a very interesting pathological specimen.

I next proceeded to examine the left kidney, which was found to be in a condition the reverse of the right, very much atrophied, and exceedingly dark in colour, resembling that of the spleen more than the kidney. On opening it we found the cortical substance almost obliterated. Pelvis apparently enlarged, and some calcareous matter scattered over its surface.

Ureters evidently natural; no thickening.

Bladder. Having removed the bladder entire, we were enabled to examine it thoroughly. The whole organ was very much thickened, which might have been expected from the chronic inflamed condition in which it had been for so long. The incision that I had made in the neck of the bladder at the operation was open, union never having taken place, or, if it had, absorption of the cicatrix had occurred before death.

Nothing further was examined, being satisfied that the renal calculus and abscess was the cause of death.

In conclusion, Mr. Chairman, I must confess that I have been not a little puzzled with the course this case took. As the autopsy has shown to us, a large renal calculus was found in the right kidney, with an accompanying abscess. How the patient did not show more marked symptoms of that prior to the operation seems to me very strange. That the calculus existed in the kidney for a considerable time before the operation there can be no doubt, as the pathological changes found there must have taken months to have become so marked. Why should my patient improve, as undoubtedly he did, from the day of the operation up to a fortnight prior to his death? These and other questions I should like to have answered, and I put them forward with the hope that they may provoke discussion on the subject. I place before you both the right and left kidney, as well as three *stones* removed from the bladder.

A Case of Melano-sarcoma of the Choroid. By Dr. A. Proudfoot.

(Read before the Medico Chirurgical Society.)

Gentlemen,—I venture to read this paper before you, this evening, not from any peculiarity in the case itself; or from its great rarity; but from the extreme importance of an early diagnosis in such cases; as they generally endanger, if they do not destroy the life of the patient.

Therefore, the more familiar we are with them, the more likely we shall be to discover them in their earliest stage and give the patient a chance for life, by at once removing the eye.

On December 4th I was consulted by Mrs. C. æt 45, the wife of a well-to-do farmer from the United States, on account of almost entire loss of vision in the right eye. Mrs. C. was the mother of three children; had usually enjoyed pretty good health, though subject to attacks of sick-headache. About two years ago she first noticed a slight weakness of the right eye; but it was unaccompanied by pain, and therefore gave her but little uneasiness. For the last year she had been losing the sight of the eye; in August she first applied to her family physician for relief; he diagnosed incipient cataract and put her upon a course of tonics. The sight, however, gradually decreased until she came into this city to consult me. In September (three months ago) she first experienced great pain in the eye; it had lately become so severe that it kept her awake at night, making her at times, to use her own expression, "almost crazy." It was of a shooting character and extended from the eye across the right side of the head and down into the neck. The paroxysms of pain were intermittent, coming on usually every other night; the patient being comparatively comfortable and free from pain during the interval. On examination I found the tension normal in both eyes, the iris in the left eye was of a light blue color and the pupil of natural size, while the pupil of the right eye was of

unusually small size and extremely sluggish, responding almost imperceptibly to the stimulus of light; the iris was throughout of a dusky gray color, excepting at the lower part, from near the margin of the pupil, where it was of a blackish-brown color and pushed forward so as to be in contact with the cornea at its lower and outer edge.

Upon dilating the pupil with a strong solution of atropine I had no difficulty in diagnosing a melano-sarcoma of the choroid, as the tumour could be seen occupying the lower third of the eye; although there was an incipient cataract of the lens. The ophthalmoscopic appearance of the eye was very beautiful, as the retina could be seen detached from the choroid and stretched tightly over the tumour

throughout its extent, its vessels being seen with great distinctness. The fundus and the disc were apparently perfectly healthy. I advised immediate enucleation of the eye, and the operation being consented to, the patient returned to the hotel, where I placed her under æther, and assisted by my friend, Dr. Hamilton, and her husband, I removed the eye in the usual manner; great care being taken to divide the nerve as far back as possible. Upon making a horizontal section through the middle of the eye, just below the optic nerve, I found the tumour to occupy its lower third, and to consist of two lobes, the larger lobe being about four-fifths of the entire size of the tumour, commencing about four lines below the disc and extending forward to the iris, which it pushed into close contact with the cornea, thus obliterating the lower part of the anterior

chamber of the eye. The smaller lobe was situated somewhat posteriorly and made up the remaining fifth of the tumour, being partially separated from it by a shallow groove. The upper two-thirds of the eye were perfectly healthy, the retina and optic nerve not being implicated.

Prognosis.—Knapp, in his book on "Intra Ocular Tumours," describes eight cases of melano-sarcoma of the choroid, four of which were cured by enucleation. The remaining four died of other affections. He states that if the tumour is still confined to the eye, and the optic nerve unaffected, the chances are rather in favor of a complete recovery after the operation. I am therefore inclined to give a favourable prognosis in this case. The patient returned home on the fourth day after the operation, doing well.

My friend, Dr. William Osler, has kindly undertaken the examination of the minute structure of the tumour, and has likewise prepared a number of microscopic slides, which are here exhibited:

Histological Characters of the Tumour. By Wm. Osler, M,D., L.R.C.P., London, Prof. Institutes of Medicine McGill University.

Portions taken from the superficial regions of the tumour, and teased in ¾ oz. salt solution, presented a great solutiou of cells, almost all of which were rounded, very variable in size, and characterized by the presence of large vesicular nuclei and small clear nucleoli. With regard to size, three grades could be easily distinguished: 1st, small round cells, about the size of the white blood corpuscle, or, perhaps, a little larger, with well-defined nuclei; comparatively few of these contained any pigment. 2nd, cells from two to three times the size of white blood corpuscles, much more uniformly pigmented than the former, with very large nuclei, and finely granular protoplasm. 3rd, very much larger elements—five or six times the size of colourless blood corpuscles, containing

two or three nuclei, and not often pigmented. Compared with the others, these latter forms were scarce. Gradations between these varieties were common. Here and there throughout the specimens a somewhat elongated corpuscle was met with, but no characteristic spindle-shaped elements; indeed the tumour must be regarded as a very pure specimen of round-celled melano-sarcoma. The distribution of the pigment in the tumour was irregular, confined chiefly to the external portions, and extending into the interior as dark streaks; and according to the region from which the preparation was taken the prevalent cells would be pigmented or not. Individual elements from the darker portions showed different degrees of colouration, from cells containing only a few pigment granules up to others so densely crowded as to obscure the nuclei.

Portions, (after hardening in alcohol) taken with the sclerotic from the external region of the tumour, imbedded, and thin sections cut and tinted with Hæmatoxylin, show very well the structure of the growth, and its relation to the surrounding parts.

The sclerotic was nowhere affected, nor did it appear at all atrophied over the region of the growth. In one or two sections a slight increase in the cellular elements along the course of the vessels was observed, but this condition was by no means general. Immediately within this tunic was a layer, about half the thickness of the sclerotic, characterized by the presence of numerous long spindle-shaped pigment corpuscles, and others of a more irregular form. A delicate connective tissue with numerous blood vessels composed the matrix, so that this may be regarded as the external layer of the choroid very slightly altered. In some sections it would appear that the tumour involved the whole of the outer layer of the choroid for the round sarcoma cells abutted directly upon the sclerotic.

By a gradual transition we pass to the region of the tumour with abundant round cells closely aggregated together and very irregularly pigmented. At the most ex-

ternal part the fibrous stroma of the choroid is infiltrated to such a degree with cellular elements, that, in places quite an alveolar structure is given to the growth. In the deeper portions this is lost, and the cells appear crowded together without any intercellular tissue. Still further towards the centre, a well developed matrix, granular in character, is seen surrounding each cell. In thin sections many of these cells fall out and leave the connective tissue framework as an open net-work, in which here and there a larger cell is retained. Pigmented cells occur scattered throughout the sections, either singly, or collected in small clusters. A few hæmorrhages are seen towards the centre of the growth.

The portion of the retina lying upon the tumour was carefully removed and on examination proved perfectly healthy Along the course of some of the vessels minute extravasations were met with and groups of pigmented corpuscles were not uncommon. These latter were rather larger than the colourless blood corpuscles, and in one or two localities were observed to contain red blood corpuscles in various stages of transformation into melanin. After removal of the retina, a thin dark membrane could be stripped from the surface of the growth, which was found to be the innermost layer of the choroid, consisting of regularly polygonal pigment cells, beneath which the usual stellate pigment corpuscles existed in abundance, so that at no point had the tumour perforated the surface of the choroid.

Sections taken trom the smaller tumour at the point of junction with the healthy tissues are very instructive, showing how the growth has originated from the central and inner region of the choroid, and in its onward growth split it into two layers, one of which, the external, remains in contact with the sclerotic, while the other invests the surface of the tumour. The advancing area of the growth in these sections is represented by a wedge shaped portion, composed of numerous round cells, and at its periphery several large vessels can be seen.

Case of Glioma of both Retinæ. Extirpation of Both Eyes.

By GEO. E. FENWICK, M.D., Prof. Surgery McGill University.

(Read before the Medico-Chirurgical Society of Montreal.)

I am induced, Mr. President, to bring before the Society this evening a case of glioma of both Retinæ, which came under my observation recently, and for which both eyes were removed. This case forms a fitting supplement to the very interesting paper just given by Drs. Proudfoot and Osler. It illustrates the second and third stages of the disease Glioma, and my friend, Dr. Osler, has furthermore kindly made a careful microscopical examination of the tumours in both eyes, which conclusively settles the question as to the nature of the disease, if any doubt had existed previous to their removal. These microscopic preparations are before you, and I feel certain that Dr. Osler will take pleasure in affording any information as to the particular locality, &c., from which the specimens have been taken.

The following report has been furnished to me by Mr. R. W. Powell, Clinical Clerk at the Montreal General Hospital:

L. P., aged 5 years, was admitted into the Montreal General Hospital, on the 10th December, 1875, suffering from glioma of the retinæ of both eyes.

History.—The father states that three years ago the child suffered from sore eyes. They were tender, red, slightly inflamed; had little specks or pimples on the sight, and there existed great difficulty in looking at the light. Very little was done for the child, except bathing the eyes with a wash that had been procured from an apothecary. This state of things continued. Last March the family removed to Rouses Point, and at this time the child was almost perfectly blind. He improved somewhat after going to the country. Some time in June last, it was noticed that he would stumble over objects and run against things

in the room, as though his sight was seriously impaired. At this time the right eye looked swollen and prominent, and was tender. The child was brought into Montreal and shown to an oculist, who stated that an operation would have to be performed ; that the sight was gone in the right eye, and that it would be lost in the other. The parents were unwilling to consent to any operative proceedure and returned home. The eye gradually but steadily increased in size and was extruded from its socket. Some time in November the tumour opened near the inner canthus and discharged a considerable quantity of pus and blood. It bled freely on two or three occasions, when a scab formed over the part which had burst, and further bleeding was arrested. It was on the 8th December, that on passing through Rouse's Point, I was requested by the father to see his child, and I advised him to bring the child to Montreal, and that I should take him into the Montreal General Hospital and extirpate the tumour. The man said that he believed both eyes were affected, and I remarked that if such were the case, they ought to be both extirpated. I had no opportunity of examining the left eye, as my time was limited, and the little fellow was rebellious, and would kick and scream most vigorously when any person attempted to examine the eye, but the appearance of the right eye was unmistakable.

General Condition.—The child was moderately well nourished, though he appeared rather fretful and anæmic ; the thyroid gland was somewhat enlarged ; his appetite was very good, and he did not complain of any pain, except when the eyes were touched, or at night when he sometimes suffered considerably. The tumour of the right eye was the size of a small orange, covered with the unbroken mucous membrane, the lids considerably stretched over the mass. There was no appearance of a cornea, except, that at the upper and outer part of the centre of the mass there was a slight prominence, which I took for the cornea.

The left eye, when examined, was enlarged; there existed considerable intra-ocular pressure; the iris was fully dilated, and the margin of the pupil was surrounded by a serrated border; the lens appeared to be in the anterior chamber, and pressed up against the inner surface of the cornea; it was perfectly transparent, and the usual lustrous primrose hue was noticeable, but no distinct tumour was visible. The episcleral vessels were enlarged and radiated towards the corneal margin, and the conjunctiva and lids were red and swollen.

On Saturday, 11th December, both eyes were removed in the following manner: Chloroform having been administered, the outer canthus of the eye was slit and the upper and lower lids separated by a few touches of the knife from the investing membrane of the tumor. I now found that the periosteum of the orbit was involved in the mass, and with the finger it could with ease be stripped from the bone. This was done down to the very bottom of the orbit, when, with a curved pair of scissors, the nerve was divided, and the entire mass came away. A good spurt of blood followed, but was arrested with perchloride of iron, and the orbit plugged with cotton wool. The left eye was then enucleated in the usual way, the nerve divided close to the ball, but a second slice removed further back. There was very little hæmorrhage from the left eye. A piece of lint was placed over the wound, and soft pads of cotton wool, covered with a square of fine linen supported the lids; child removed to bed.

December 12. The child passed a restless night. The evening temperature was 100.4; morning temperature, 100.2; pulse was full, but rapid, about 140. Vomited once during the night; this was attributed to the chloroform.

13th. Last night the temperature about nine o'clock was 102; pulse still about the same. He past a good night; slept well, and this morning the temperature was down to 100.4, and the pulse had fallen to 136. He was ordered beef tea and corn starch. He appears very comfortable;

does not complain of pain ; his face is somewhat flushed, and he takes his food with a relish.

14th. Passed a good night, rested well; appears anxious for his meals ; the bowels have acted. Wound was dressed to-day ; there is considerable discharge from the right eye, less from the left ; much of the cotton was removed from the socket, and the part syringed out with carbolic acid lotion, one part in one hundred of water, as the discharge is rather fœtid.

Section of Tumour of the Right Eye.

This treatment was continued throughout. The wounds were dressed every night and morning, and at each dressing the cavities were well syringed out with carbolic acid lotion. The pulse and temperature steadily fell, the former remained at from 90 to 100, and the latter became normal. The child was taken up and dressed each day, and, as far as the wounds were concerned, was well ; and on the 30th December his parents were told they might take him home.

As far as can be ascertained, there is no history of cancer in the families of either parent.

It may be asked why, in so hopeless a case, so far advanced, perform so serious an operation as the extirpation of both eyes. To this I can but reply that so far as the eyes were concerned the sight was gone, both eyes were destroyed. The operation was justifiable as a palliative measure even if the time had passed for its curative effect. The child was suffering very much from the effects of the disease, the gradual distention from pressure rendered existence most miserable. He was constantly moaning and crying, passed wretched nights, and this was producing a marked effect on his general health. We can hardly ex-

The Left Eye.

pect a non-recurrence of the disease, but we may reasonably hope for a short respite. However, the child has returned home happy and contented, or at least temporarily relieved from a condition of continued misery. I held out no hope to the parents of ultimate and complete relief from this wretched disease, but advised them should the disease reappear to return with him to the hospital. I shall watch the case with much interest, and may on another occasion record the final results. We give wood cuts of both tumours which will add to the interest of the case.

Histological and General Description of the Tumours. By Wm. Osler, M.D.

The tumour of right eye filled the whole orbit, and, on removal, presented a somewhat rounded mass about the size of a small orange. A meridional section, made through both eye and tumour, displayed a foreign growth filling up the former and extending above and posteriorly to the extent of about an inch in either direction. A tolerably firm capsule, strongly adherent to the tumour, enveloped the whole, and was at no point perforated. The eye-ball itself occupied the lower and anterior position, and quite half its mass projected beyond the tumour. Its limit was sharply defined by the sclerotic, which persisted as a pale white band, intimately united to the growth and much narrowed in certain localities. Posteriorly the eye-ball was of triangular shape, due to pressure of the tumour, the apex corresponding to the optic nerve.

The color of the surface section was whitish, reddened here and there by extravasations. Many parts, especially the more external, were of a pure milky white, unstained by blood. Other regions, markedly the inferior and intra-ocular, were of a uniform light red tint. The contents of the eye-ball consisted mainly of the morbid growth, together with the atrophied remains of the tissues of the eye. These latter, pushed forward against the cornea, were composed of an irregular mass of caseous matter, situated about the position of the lens, and probably representing its remnants; whilst behind this was a considerable quantity of pigment matter—traces of the tissue of the choroid. About a line and a half from the inner surface of the cornea was another irregular dark line, best seen in the external region, which is to be regarded as the atrophied iris. Both anterior and posterior chambers are filled with a reddish, highly vascular growth. The situation of the ciliary muscle is clear, and its substance is converted into a soft friable mass. The whole of the intra-ocular growth was reddish in colour and

very soft. A hard fibrous portion existed in the centre, from which one or two bands extended to the upper and back parts of the ball. The optic nerve being imbedded in the tumour, about an inch of its length having been removed. The part in immediate connection with the eye is slightly thickened, while the remainder looked normal in size. The neurilemma was only slightly attached to the growth, so that the nerve was easily lifted from its bed. At no point could any distinct perforation of the sclerotic by the tumour be detected, but at the posterior part it was much thinned, and about the optic nerve the intra and extra-ocular growth seemed continuous.

In the left eye, the tumour was wholly intra-ocular, and, as an irregular rounded mass, nearly filled the globe, extending from the nerve to the lens, the anterior surface of which lay against the cornea, while the posterior was imbedded in the growth. The choroid was *in situ* and slightly atrophied. Section of the tumour showed a tolerably white surface dotted over with a few small extravasations.

Sections taken from the smaller growth in the left eye show the characteristic small round cells of glioma, densely packed together without any distinguishable matrix. Numerous blood vessels were evident, and along their course spindle shaped and stellate pigment corpuscles abound. In the region of the growth no trace of any layers of the retina remain. The choroid is also involved in parts and its tissue infiltrated with glioma cells. Neither degenerative changes nor extravasations were present.

The larger tumour, occupying the right orbit was of essentially the same nature, but presented signs of fatty degeneration in the central portions, and very many coarse and fine extravasations. In the superficial extra-ocular region the gliomatous character of the growth was best seen, which differed in no respect from the tumour in the other eye. No matrix proper was apparent, though in some sections strong fibrous trabeculæ occurred, the remains probably of some of the tissues of the orbit. Sections of the optic

nerve showed the nerve tubules everywhere degenerated, but not involved in the growth. The neurilemma, on the other hand, was densely infiltrated with the characteristic small round elements.

Hospital Reports.

MEDICAL AND SURGICAL CASES OCCURRING IN THE PRACTICE OF THE MONTREAL GENERAL HOSPITAL.

Case of Abscess between the Cranium and the Dura Mater, simulating Occipital Neuralgia. Under Dr. Ross. Reported by Mr. C. H. MURRAY.

Mary Moody, native of Ireland, aged 50, a strong looking woman, accustomed to hard work, was admitted into the Montreal General Hospital, Nov. 24th, 1875, under care of Dr. Ross. Has been a widow for five years; had seven children, two of whom are living; family history good: has been perfectly healthy till two years ago, when she was in hospital for pain in her left ear and sore throat; under treatment she was relieved. Since then she has been in hospital several times, and was always treated by different physicians for neuralgia of the left occipital nerve. Last summer was in hospital with popliteal cellulitis and threatening abscess.

The chief symptom complained of now is very severe pain along the course of the left occipital nerve, running sometimes along the left side of the head to the eye, the slightest pressure over the occiput and neck on the left side caused intense agony. The case was diagnosed to be one of neuralgia, and she was ordered a liniment of chloroform and aconite and hypodermic injections of morphia.

She continued in much the same condition, but much relieved by the hypodermic injections, till the 17th Dec., when she began to vomit and became very stupid, answering incoherently, like a person intoxicated. Urine and

fœces were soon passed involuntarily. There was almost complete paralysis of motion, and at the same time some hyperæsthesia of the general surface. The vomiting lasted till the night of the 18th, then ceased. She was delirious at night and very noisy, keeping the patients in ward awake. Brandy, wine and nourishing food were freely supplied.

20th—2 p.m. Is in a moribund condition; extremities cold and livid; lips blue; features pinched; pulse imperceptible at wrist; heart sounds feeble, 100; resp. gasping, 40; is still partly conscious, and complains of great pain in the left side of occiput; neck and lumbar region, hyperæsthesia of general surface marked: both pupils of medium size, respond to the stimulus of light; urine and fœces passed involuntarily; bladder ascertained to be empty by percussion.

She died at 12 (midnight), delirious and shrieking wildly for some time before death.

Post-mortem Appearances

Rigor mortis and hyperstatic congestion well marked. On dissecting off the scalp, about 1½ oz. of thick sanious pus was found lying beneath the pericranium on the posterior half of the parietal bone, and the posterior superior angle of right parietal and left upper third of occipital bone. This pus flowed from the interior of the cranium through two foramina, one oval, situated in the middle of the left half of the lambdoidal suture, about three lines long by one and a half broad; the other, circular, about one and a half lines diameter, situated at the bottom of a depression, evidently of old standing, between the parietal and occipital bones. The bone externally did not show any trace of pus having long lain beneath the pericranium. On removing the calvarium about ℥ss of similar pus was found external to the dura mater in the position corresponding to the external abscess. The posterior third of the left parietal, the posterior superior angle of the right parietal,

left cerebral fossa and superior angle of occcipital bone were much eroded, and in the two places mentioned completely perforated. In many places the bone was quite translucent. The external surface of the dura mater beneath the abscess was a little toughened, the pus being slightly adherent to it. It was not much thickened. Its internal serous lining was intensely congested, but over the rest of the brain was perfectly natural. The sinuses of the brain were full of dark clotted blood. The pia mater was congested. Punctæ vasculosæ not well marked; the posterior lobe of left hemisphere was flattened, and brought to a sharp angle posteriorly. The substance of the brain throughout was perfectly normal. The ventricles normal. The skull was not symmetrical, there being a distinct prominence of the bone in the situation of the abscess.

LUNGS.—Pleuræ adherent posteriorly to a considerable extent. Lungs healthy; dependent parts congested.

HEART.—Structure normal; a large ante-mortem clot existed in right ventricle extending into the pulmonary artery.

LIVER congested. Spleen congested and soft.

KIDNEYS.—Right kidney, weignt 9½ oz., Left, 8½ ounces. Capsules non adherent; external surface of kidneys pale presenting numerous congested spots. On section the medullary substance was pale and coarse in appearance, soft and much increased in thickness; pyramids slightly injected.

A Third Dentition at the Age of Seventy-Three.—M. Echerac relates in the *Gazette des Hospitaux* (October 9,) the remarkable case of an old gentleman, aged seventy-three, who, after the manifestations of nervous symptoms for some time, and an abundant salivation, exhibited in his upper jaw, which had long been dismantled of teeth, some fine ones projecting about two millimetres beyond the edge of the gums. They were six in number—four incisors, one canine, and one small molar. These teeth were neither very white nor very strong, but formed an excellent substitute for those lost. Van Helmont relates a precisely similar case occurring at the same age.

Reviews and Notices of Books.

A Treatise on Human Physiology, designed for the use of Students and Practitioners of Medicine. By JOHN C. DALTON, M.D., p.p 825, sixth edition HENRY C. LEA, Philadelphia, 1875.

A Text Book of Human Physiology, designed for the use of Practitioners and Students of Medicine. By AUSTIN FLINT, JR., M.D., pp. 978. D. APPLETON & Co., New York, 1876.

Among American Physiologists the authors of the above works have for several years past occupied the most prominent position, and indeed the reputation of the American school of Physiology, if such can be said to exist, rests in great part upon the labours of these men.

A text book like Dalton's, which has arrived at the sixth edition may be regarded as almost above criticism, but the volume before us has received so many valuable additions, and is so much enlarged, that some notice is demanded of it. We know of no text book of Physiology, with the exception perhaps of Kirkes "Handbook," so suitable for students. The style is clear, the arrangement admirable, and the figures excellent. Though much increased in bulk, it is still a moderately sized volume, and not nearly so alarming in this respect as the one we have coupled with it at the head of this notice. Every chapter bears evidence of careful revision, and all the most important and trustworthy facts of recent physiological science have been incorporated. The sections upon the digestive secretions and development are enriched with the most numerous and extended original observations. The chapter upon the glycogenic function of the liver is especially good. In the development section we are glad to notiee three or four new figures from Balfour and His, illustrating the segmentation and formation of the blastodermic layers in the fowl's egg.

The whole of this portion of the work is well worthy the careful perusal of every practitioner. There are one or two things wanting which detract from the general excellence, and which we should like to see supplied in a subsequent edition. We looked in vain for a description of the physiological anatomy of such important organs as the kidneys ; there is not even a reference in the index to such structures as the tubuli uriniferi or the malpighian tufts. Again the consideration of the spleen and other ductless glands should not be wholly omitted in such a treatise. With these exceptions, however, too much praise cannot be given to the general execution of the work.

Dr. Flint, jr., has for some years past been engaged in teaching Physiology as Professor of that branch in the Bellevue Hospital Medical College, and his devotion to the science is evidenced by the amount of labour and research which are to be found in his works on this subject. He has already given to the profession a work in five volumes entitled "the Physiology of Man." This is an exhaustive treatise, designed more for teachers, but which we regret to say, was not forwarded to us for review. The present book assumes to be a condensation of the volumes above alluded to, and the author states in his preface that many of the subjects treated of rather elaborately in his large work are here rendered in a more concise form. We cannot help thinking that as a text-book for students the process of condensation might have been carried still further. It is a large tome, and, though replete with interesting information, will, we are afraid, seem too formidable to the busy student, who has now-a-days so many subjects to master that small text books to read with his "notes" are chiefly sought after. However, for senior students and practitioners desiring a full and lucid account of any part of the physiology of man we know of few books to which they could with more profit refer.

In the opening chapter the general character, histology, and chemical composition of the blood are treated of in a

most exhaustive manner. Considering the importance which the colourless corpuscles have assumed in recent pathology a more extended account of the peculiar amœboid changes might have been given. Dr. Flint expresses himself in opposition to the current views on the development in the adult of the red blood corpuscles from the colourless ones, and looks upon them as fixed anatomical elements, not undergoing destruction and regeneration as commonly supposed. No reference is made to the observations of Recklinghausen and Golobew of their development in the frog at the expense of the colourless, nor is there any mention to be found of the development of these bodies in the marrow of bones, a fact established by recent German investigation. The views of Richardson on the cause of the coagulation of the blood, the evaporation of ammonia theory, maintained in his larger work, are here abandoned. Schmidt's account of fibrin forming factors, para-globulin and fibrinogen, are not regarded as established.

The physiology of circulation is excellently given, and accompanied by many beautiful illustrations. It is very interesting to have here reproduced some of the figures of the older anatomists, as Harvey and Fabricius, and they look remarkably well, even more faithful to nature than many others in the work.

Under Respiration, a good account is given of the author's experiments, which prove that the respiratory sense, the "*besoin de respirer*," is situated in the tissues.

The subjects of alimentation and digestion receive full attention. We notice that Dr. Flint still adheres to the belief that the acid of the gastric juice is lactic, and not hydrochloric.

The recent researches on the lymphatic system have not received the attention they deserve, and the author does not accept the existence of serous canaliculi, in which most histologists now believe the lymphatic capillaries originate.

The article on the kidneys and urine is exceedingly good,

the latter being a subject to which the author has paid special attention.

In connection with the excretory function of the liver, the author's discovery of the elimination of cholesterine by this organ, and its subsequent transformation in the intestines into stercorine, is referred to.

The chapters upon the nervous system and special senses are well given, and notice is found in the former of the recent experiments by Hitzig and Ferrier.

The article on generation is ably written, and embellished with three superb full-sized plates, two illustrating the early embryos of the vertebrates, from Hackel, a consideration of which ought to be sufficient to make anyone an evolutionist; while the third represents a human embryo at the ninth and twelfth weeks.

The illustrations are remarkably fine, a large proportion of them being from Sappey's large work on anatomy. Several micro-photographs from the Army Medical Museum form novelties in the way of illustration; some of them are very good, as of the blood corpuscles and muscles; others, as the one of cartilage, had better have been left out. We would call special attention to the figure of the mesentery, showing the lacteals, copied from a work of Asellius, published in 1628, as illustrating the state of anatomical knowledge at that period.

We regret that the number of original illustrations are so few. Borrowed figures we consider one of the most objectionable features in a text book by an original worker in Physiology. One of the great merits of Prof. Dalton's work is the number and excellence of the original illustrations. In this matter more than any other, a man should "neither a borrower nor a lender be."

Throughout the work it is very evident that Dr. Flint received his physiological education in the French school. He displays a much more extended knowledge of the French literature of the subject than that of the English

or German; indeed it would sometimes appear as if the latter had not received full justice.

Altogether the work before us is one that we can most heartily recommend, and though it lacks that philosophic treatment of subjects which characterizes Dr. Carpenter's large Treatise, we have no doubt that in America it will, as one of the most exhaustive text books in the lauguage, largely replace that work.

On Poisons in Relation to Medical Jurisprudence and Medicine. By ALFRED SWAINE TAYLOR, M.D., F.R.S., F.R.C.P., London, and Lecturer on Medical Jurisprudence in Guy's Hospital. Third American, from the third and thoroughly revised English Edition; with one hundred and four illustrations. 8 vo., pp. 788. Philadelphia: Henry C. Lea, 1875.

A new edition of Taylor on Poisons will be hailed with satisfaction by the profession, as the want of a new treatise specially devoted to the subject of poisons has long been felt. Toxicology as a department of medical jurisprudence has very much progressed during the past ten or fifteen years. This has been rendered necessary from the large addition of new remedies which year by year are being made to the list of Materia Medica. Many of these substances contain principles of great potency; the action of some is ill understood, and the chemist is almost daily discovering new compounds, so that the study of toxicology has been rendered more attractive and essential.

This treatise on poisons must be regarded as a new work, inasmuch as the greater part of it has been re-written. The changes in this edition have been rendered necessary through changes in nomenclature, classification, besides the discovery of many noxious substances, whose action on the system has not been definitely determined.

Very great good is being done through physiological inquiry. To ascertain the action of certain substances or

their compounds, experiments have to be instituted. These are usually conducted on the lower animals, and although there are those who condemn this method of research as unnecessary and objectionable, and go so far as to endeavor to put a stop to it by legislative enactment, yet there can be little doubt that as a system of scientific investigation it must in time afford results which will go far in the repression of crime, and in its exposure.

In speaking of this work, the author states that it is not intended to be a complete history of poisons and poisoning, as the subject is so extensive that it would be impossible to compress all that could be said into the narrow space of a single volume; nevertheless, little or much, it is a volume indispensable to the student and practitioner, more especially to those who enter upon the duties appertaining to medical jurisprudence. The entire work has been remodelled. The first twenty-two chapters are devoted to general considerations; such as the definition of the term poison; mode of entrance of poisons and of their elimination; detection of poisons; chemical and physical characters of poisons; organs specially affected by poisons; influence of habit; classification of poisons; evidence of poisoning in the living; diseases resembling neurotic poisoning; evidence of poisoning in the dead body; inspection of the body and points to be observed; objects of a chemical analysis; evidence of poisoning from experiments on animals; and moral and circumstantial evidence in cases of poisoning.

The next part of the work is devoted to special poisons, and is divided into irritant poisons and neurotic poisons. Under the first headings we have, mineral irritants; acid poisons; alkaline poisons; non-metallic irritants; metallic irritants; vegetable irritants; animal irritants. And under the general caption of Neurotic Poisons, we have the following sub-classes: Cerebral or narcotic poisons; spinal poisons; cerebro-spinal poisons; and cerebro-cardiac poisons. Continental chemists appear to be labour-

ing in this field of research, and the Germans in this, as in all others, with their customary exactness. The colour tests for the alkaloids, when taken alone, may fail to give satisfactory evidence of any one of them. Taking any special alkaloid, its detection by the colour test might lack that certainty which would be demanded by a court of law, but when superadded, the toxicologist brings into the field of investigation physiological experiment, the argument then becomes complete, and the answer positive. Indeed, fn some notable instances the chemical expert has had alone physiological tests to guide him, and these have been so thoroughly convincing as to leave no opportunity for doubt. In speaking of tests for strychnine poisoning, we are at a loss to account for the absence of all mention, on the part of our author, of the process recognized as Rodgers and Girdwood's method. Our attention has before been attracted to this studied silence of all mention of this process, which is admitted on all hands to be a most excellent method, and one by which, according to Fresenius, in his work on Qualitative Analysis, Messrs. "Rodgers and Girdwood succeeded in detecting by this method .03 mgrm. of strychnine."*

Dr. Girdwood is at present residing in our city, and occupies the chair of Practical Chemistry in McGill University. Furthermore, while on this subject, we may observe that in three cases of poisoning by strychnine which came before our assize courts, the records of which were published in the early volumes of our journal, Dr. Girdwood satisfactorily demonstrated the presence of strychnine in each case. In one the body had been in the grave for five months, and after exhumation the poison was proved to exist in a portion of the thigh bone, as well as in other parts of the tissues. In this case we were present at many of the chemical and physiological experiments, and were satisfied with their accuracy. It seems

* Qualitative Chemical Analysis, by Dr. C. Remigius Fresenius, seventh edition, edited by Arthur Vacher. London: John Churchill & Sons. Page 249.

strange that Dr. Taylor should pass over, not only in this work, but in all his works, all recognition of the merits of his fellow workmen. We trust it is not from petty spleen. It cannot be from unworthy rivalry, because our author occupies deservedly a high position as a medical jurist. We will say no more on this subject now, but merely add, that systematically ignoring a process recognized by all other writers on this subject as deserving of notice, forms a unique feature of this very excellent treatise on poisons.

In every other respect this is a work of peculiar exeellence, and will without doubt become the standard of reference by the medical jurist on all subjects of poisons and poisoning.

With regard to typographical execution, we need only state that it is done in Henry C. Lea's best style,

The book is to be had at Dawson Bros., St. James street.

Periscopic Department.

SURGERY.

Case of Aortic Aneurism successfully treated by the Distal Ligature. By THOMAS ANNANDALE, F.R.S.E., Surgeon to the Edinburgh Infirmary, and Lecturer on Clinical Surgery.

R. B., aged 62, was first admitted under my care in August 1874, on the recommendation of Dr. Wilson of Motherwell. The patient had suffered from symptoms of thoracic aneurism for about six months; and, as these were steadily increasing in severity, he was advised to come into the infirmary.

On admission, there was a distinct aneurismal tumour, pulsating strongly, and passing up from behind the clavicle and sterno-clavicular articulation into the neck, as far as the cricoid cartilage. The trachea was displaced towards

the left side by the tumour, and the inner half of the clavicle and its articulation with the sternum were pushed forward by the portion of the tumor under them. There was a well marked *bruit* to be heard on all sides of the swelling, and there was dulness on percussion over a considerable area, corresponding to the situation of the thoracic part of the tumour. In addition to these symptoms, the patient had a constant irritating cough, pains shooting up into the head, want of sleep, and he was losing flesh markedly. He was ordered to keep in bed, and iodide of potassium, in twenty grain doses, was given three times a day. After one month of this treatment, he left the hospital with his symptoms somewhat relieved, and he was advised to continue the iodide of potassium.

On February 8th, 1875, he was again admitted into my wards, as his symptoms had returned and become more troublesome. He had been unable to continue the iodide regularly, owing to the expense of it. An examination of the tumour showed an increase in its cervical portions. It had not only spread higher up, but it had also spread laterally so as to overlap the site of the subclavian artery. The upper portion of the tumour felt softer; and it was this portion which seemed to be increasing most rapidly. After carefully considering the circumstances of the case, and determining that pressure on the right carotid artery, immediately above the cervical portion of the tumour, very much diminished the aneurismal pulsation, it seemed to me a favourable opportunity for practising the distal ligature. The position of the tumour did not permit the subclavian artery to be ligatured; but there was just sufficient room to secure the common carotid above the cervical portion of the aneurism.

The patient having given his consent, I, on the 2nd of March, ligatured the common carotid immediately under the omo-hyoid muscle, which was drawn upwards, so as to reach the vessel. The internal jugular vein was unusually large and dilated; and some care was necessary to avoid

injuring it, as it completely overlapped the artery. The operation was performed under the carbolic spray, and the ligature used was prepared catgut. The immediate effect of the ligature was to almost stop the aneurismal pulsation. and to convert the strong pulsation into a kind of quivering motion. Not the slightest local or constitutional disturbance followed the operation; and the wound was healed on the 17th. A week afterwards, the patient was out of bed. The day after the operation, the patient expressed himself as greatly relieved. He no longer himself felt the pulsation in the tumour, and the pains in his head and neck had disappeared. The pulsation in the aneurism was felt to be very feeble, and the tumour itself was decidedly smaller.

The patient left the hospital a few weeks afterwards, his symptoms continuing in the same improved condition, and the tumour gradually becoming firmer to the feel.

From time to time, the patient returned from the country to show himself, and his state on December 27th was as follows: His general health was good, and he had no pain or other uneasiness. He could stoop freely without giddiness, and could go up and down stairs easily. The tumour had continued to diminish in size, and its cervical portion was fully half an inch lower in level than before the operation. The whole tumour had become much flatter, and also much firmer to the touch. On placing the hand over it, only a very feeble pulsation could be felt, but the pulsation was slightly stronger over the upper part of the cervical portion. A *bruit* could still be heard on all sides of the tumour, but it was not nearly so loud as formerly.

REMARKS—Although it cannot be said that the aneurism in the case reported was completely cured, there can be no doubt as to the great relief which followed the operation. The case, therefore, appears to me to furnish additional evidence in favor of the distal ligature in suitable examples of otherwise incurable aneurisms, and it also tends to confirm the opinion of Mr. Holmes and Mr. C. Holmes and Mr. C. Heath, who have so ably written on the subject.

From my experience in other cases of thoracic and cervical aneurism and from an observation of cases treated by my friend and colleague Dr. G. Balfour, I can testify to the value of iodide of pottassium in relieving the symptoms and promoting coagulation in this disease : but I am inclined to express the opinion that, should a fair trial of this drug fail to give complete relief to the symptoms, the distal ligature of the carotid should be employed, provided the case should be a suitable one for the operation. The test of the suitability of the case for operation being the effect which temporary pressure on the distal portion of the carotid has on the aneurism pulsation, and should there be sufficient space to ligature the common earotid above the tumour, then I think the case is a proper one for operative interference. I also think with Mr. Holmes that operative interference should in the first instance, be confined to the ligature of the carotid, ligature of the third part of the subclavian being resorted to if advisable at a future stage of the progress of the case.

The case reported, further illustrates the value of the antiseptic catgut ligature and other antiseptic precautions, the combined use of which has, in my opinion, removed all the most serious risks in connection with the ligature of the arteries.—*British Medical Journal.*

On the Value of Nitric Acid in the Treatment of Diseases of the Neck of the Womb. By EDWARD JOHN TILT, M.D.

Dr. Braithwaite's high estimation of nitric acid as a caustic for diseases of the cervix will have due weight with me when I prepare another edition of my *Handbook;* but he will find it already stated there, "that the acid nitrate of mercury and the acid nitrate of silver owe their causticity to their free nitric acid, while the metals may give these preparations alterative properties that their free nitric acid

does not possess." Récamier first used the acid nitrate of mercury. It was the principal caustic used by Lisfranc; and, in the beginning of his professional career, Dr. H. Bennet tried to ascertain its effects, as compared to nitric acid, in a certain number of similar cases, and he convinced himself that the acid nitrate of mercury was the better of the two. Dr. Braithwaite's fear of mercurialising the patient need not count for much; for, although I thought right to warn against this possibility, it has never occurred in my practice.

I quite understand the excellent results that Dr. Braithwaite has obtained from the use of nitric acid in a certain set of cases; but I think he is far too general in its recommendation, and that he undervalues nitrate of silver because it is so often used where it can do little or no good. Every practitioner has witnessed the good effects of this agent in morbid conditions of the fauces; and when the mucous membrane lining the cervix is alone inflamed, and *recently* so, there is no better remedy than the liquid or the solid nitrate of silver, and the patient should be cured in from three to six weeks. Occasionally, nitrate of silver causes slight bleeding of an uterine sore; but, judging from my practice, Dr. Braithwaite has exaggerated this occurrence; and then it is easy to have recourse to carbolic acid, or to tincture of iodine. Knowing that such cases can soon be cured by nitrate of silver—an agent which is easily applied, gives less pain than nitric acid, and can scarcely do harm—I still recommend its use to those who have little experience of uterine surgery; for, until they have acquired the habit of using nitric acid, they will find that it has an ugly tendency to run, and so increase the size of the sore to which it was applied, supposing they examine a week or ten days after its application.

In a second set of cases, it will generally appear from their history, that endocervicitis set in after a miscarriage or a confinement, and that it has already lasted several years; without, however, causing any marked damage to

the substance of the cervix. Dr. Braithwaite's advice applies admirably to these cases; for their treatment by nitrate of silver is distressingly long, whereas it is singularly curtailed by one or two thorough applications of a strong acid.

I demur, however, to Dr. Braithwaite's recommendation to leave the patient without examination for a month, unless the os uteri be patulous, and the calibre of the cervical canal such as to render its contraction rather an advantage than otherwise. It often happens, however, particularly in the unmarried. that the cervix will just allow the uterine sound to pass through a mucous membrane so diseased as not to be willing to get well unless it be touched with a strong acid. After applying the acid nitrate of mercury or nitric acid to the cervical canal in such cases, the practitioner had better examine the patient every week, and pass intot he cervical canal a pencil laden with a solution of nitrate of silver, or, at the end of two or three months, he would have the annoyance to find that his treatment has induced cervical stricture.

A third and less numerous class of patients comprise women in whom long continued chronic cervicitis is accompanied by considerable hard hypertrophy of the cervix, inflammation of the mucous membrane having caused its surrounding tissues to become hypertrophied. Sometimes the enlargement of both the body and neck of the womb appears to have begun in defective uterine involution. At all events, when I am consulted on such cases, they have lasted seven or eight years, or longer, to the misery of the patient, to the calamity of the family, and to the opprobrium of the profession, for such cases go the round of all those who are accepted as authorities for diseases of women. The patients do not get cured because consulting men have no faith in the only way of curing such cases—the application of potassa fusa cum calce, or some equally strong caustic, to the cervical canal. Dr. H. Bennet put this forcibly before the profession twenty years ago. He made

converts of Sir James Simpson and many eminent practitioners in this and in other countries; and I discussed, in the best way I could, this mode of treatment, in all its bearings, in thirty pages of my *Handbook*. The treatment is solidly based on the recognized utility of caustics in a host of surgical complaints, and it has been well established by the Lyons school of medicine; but when such patients come and tell me what they have had done to them by men in authority, I never learn that a strong caustic has ever been applied. I hear of long ineffectual treatment with nitrate of silver, of an acid having been used, of a pessary to support the womb, of uterine dilatation, of division of the cervix, or of the leaving in the womb of one of those thirty intra-uterine pessaries which were handed round on a tray one night when I had the honour of presiding over the Obstetrical Society of London. I even have heard that there are practitioners who believe that they can benefit their patients by introducing the index into the vagina, to attempt to rectify a moderate amount of uterine displacement, three times a week, for two or three months; but I never hear that trial has been made of the only mode of treatment likely to effect a radical cure of these cases.

To resume the preceding remarks: instead of advising nitric acid in all cases of cervical disease requiring a caustic, as Braithwaite seems to do, I now hold—1. That, in comparatively recent cases of endocervicitis, nitrate of silver, tincture of iodine, or carbolic acid, suffices; 2. That chronic cases of endocervicitis had best be treated by acid nitrate of mercury or nitric acid; 3. That hypertrophy requires potassa fusa cum calce, or some strong acid.

Since these remarks were penned, Dr. F. Churchill of Dublin has endorsed Dr. Braithwaite's views respecting the all-sufficiency of nitric acid in all cases of chronic cervical inflammation, and I am sorry to differ from so eminent a pathologist.—*British Medical Journal.*

Use of Perchloride of Iron in Post Partum Hæmorrhage. By LOMBE ATTHILL, M.D., Master of the Rotunda Lying-in Hospital, Dublin.

The case recorded by Mr. Boddy, in which death followed almost instantaneously on the injection of a solution of the perchloride of iron, conveys a very important lesson. It is, as far as I am aware, the first recorded case in which there are just grounds for believing that death was due to the use of the styptic; but, even here, the cause of death remains doubtful, there not having been a *post mortem* examination, a matter greatly to be regretted. Mr. Boddy's conclusion that "without doubt death resulted from the action of the solution of iron upon the lining membrane of the uterus" is not, in my opinion, correct. First of all, the uterus has not, immediately after delivery, any "lining membrane" properly so called; next, Dr. A. H. Ringland has, in several cases of *post partum* hæmorrhage recorded by him, carried the *solid perchloride* into the uterus and applied it direct to the interior of the uterus without producing any injurious results(*vide Proceedings of the Dublin Obstetrical Society*, session 1873-74).

I am not in a position to give an explanation of the cause of death in Mr. Boddy's case; but I believe it proved from Dr. A H. Ringland's cases, in which he applied the solid perchloride to the inner surface of the uterus, and from my own (*Dublin Medical Journal*, April 1874), in which I injected a small quantity of a strong solution into the uterus, that the application of the styptic to the inner surface of the uterus is not *per se* a dangerous practice.

I would point out that in Mr. Boddy's case an unnecessarily large quantity of the stypic was injected; for, though "the hæmorrhage ceased immediately on the injection of the solution", the process was continued till the patient gave a shriek and died; and to this continuance of the injecting process after the purpose for which it was employed was attained, the fatal result, in my opinion, is to be attributed,

which probably would not have occurred had but three or four ounces of a strong solution (one part of the strong liquor to two of water) been employed.

I think the profession are under a great obligation to Mr. Boddy for publishing this case.—*British Medical Journal.*

Treatment of Abscess of the Breast.

A point of practical surgery which is of frequent occurrence has been brought by M. Gillette before the Society of Medicine of Paris. The question, namely, whether an abscess of the breast should or should not be opened. We are here speaking only of parenchymatory abscesses, for superficial ones of course open *per se*, and in regard to submammary abscesses, all surgeons agree that they should be opened as soon as it is clear that they have formed. Since the occurrence of several fatal cases from erysipelas, in consequence of parenchymatous abscesses opened by the bistoury, some surgeons, M. Gosselin amongst others, are in favour of waiting and allowing the abscess to open spontaneously. M. Polaillon, again, maintains that by this method of treatment the opening left is the smallest possible, which is a matter of importance. On the other hand, there are surgeons who make a free and crucial incision into the breast without considering the liability there is to the entrance of germs of infection, or the possibility of fistulæ consecutive to the division of the galactophorous ducts. Between these two opposite methods of treating abscesses of the breast, there is still a third, which consists in puncturing the abscess, or at least of making a very minute opening into it. M. Gillette proposes to open the abscess not with the bistoury, but with Vienna paste. The objections to this plan are, however, obvious. There is the difficulty of reaching the abscess if it be deep, the danger of giving rise to fistulæ, which is greater even than after the use of the bistoury, and lastly the cicatrix, which is much more apparent than by either of the other methods. —(*Gazette Médicale de Paris*, No. 42, 1875.) *Practitioner.*

Moorfields Ophthalmic Hospital. Cases under the care of MR. HUTCHINSON. *Syphilitic Keratitis at an unusually early age.*

Amongst the patients at Moorfields on Monday morning, December 13th, 1875, was a child aged three, who was suffering from well-marked and symmetrical interstitial keratitis of about a month's (?) duration. The child looked healthy, and had a good set of milk teeth, but there was the history that it had been treated at St. Bartholomew's Hospital in infancy for a long continued rash and severe snuffles, and that it was then not expected to live. Mr. Hutchinson remarked that the interest of the case was in the unusually early age at which the keratitis occurred. There could, he said, be no doubt, from its character, that it was due to inherited syphilis, but he did not recollect ever to have identified this form of eye disease in so young a patient; he had several times seen it at five years old, but as a rule it did not occur till from eight to ten, and was yet more frequent about the time of puberty; it might even be delayed to the age of thirty or thirty-five, and then develop in a most characteristic manner. He was not prepared at present to give any explanation of this wide difference of range.

Suppuration of the Lachrymal Sacs in Infants.—A child three years old was brought on account of discharge of matter from the eyes. The mother stated that her doctor discovered within a few days of the child's birth that matter came from the corners of its eyes, and that this had persisted ever since. There had never been any inflammation of any part. On pressure over the lachrymal sac pus regurgitated freely through the canaliculi. Mr. Hutchinson remarked that he had seen but one similar case; in that instance he was consulted by a surgeon in the case of his own child, an infant of a few days old, which had suppuration of both lachrymal sacs. There was no redness or evidence of inflammation. Pressure over the sac caused a free escape of puro-mucus. On account of the delicacy of

the parts it was thought better, for a time at least, to abstain from mechanical treatment; and in the course of a few weeks, under the use of an astringent lotion, it entirely ceased. It was very difficult to form any conjecture as to the cause of the symptom in these two cases. Both the children were quite healthy; in both it occurred so immediately after birth that it was difficult to suspect any exposure to cold, and in both it occurred on each side, making the accident of any accidental cause improbable.—*The Lancet.*

MEDICINE.

The Physiological Action of Arsenic.

A student named Kossel undertook a series of researches in the Physiological Institute at Berlin, upon the influence exerted by cautiously increased, but ultimately fatal, doses of arsenic, upon the economy of dogs, but having to leave Berlin before they were completed, Gahtgens continued them, and gives the following as the results obtained. The occasion of the research was the remarkable parallelism which exists between fever (pyrexia?), diabetes, and poisoning with phosphorus in regard to the occurrence of remarkable increase in the disintegration of tissue albumen, in Voit's sense of the word. Poisoning by phosphorus is characterised in addition by the deposition of fat in the tissues of various organs, which also appears to occur after the use of arsenic and antimony. From an anatomical and pathological point of view the action of arsenic must be regarded as analogous to that of phosphorus, to which it presents so many points of analogy. If the ordinary view be accepted, that the fat is formed from the contents of the cells (of the peptic, hepatic, renal, canalicular cells) the question arises, what becomes of the nitrogenous constituents of these cells? To afford an answer to this question a dog, weighing 44 lbs., was sufficiently fed for fifteen days and then completely deprived of food, whilst arseniate of

soda was administered by means of a sound. The experiment was continued for ten days, and careful examination was made of the urine and fæces. The result of this showed that the albuminous substances did probably undergo disintegration and that the nitrogen was eliminated in the form of urea which underwent considerable increase. (*Centralblatt f. d. Med. Wiss.* No. 32, 1875.)—*Practitioner.*

Gelsemium Sempervirens as an Antineuralgic.

Dr. A. Jurasz of Heidelberg, having had his attention drawn to the the efiects of this drug in cases of neuralgic toothache, as detailed by Wickham Legg, and Sawyer, proceeded to try it in various cases of neuralgia, and corroborates the results obtained by those observers. The tincture was usually employed in doses of from five to twenty drops. The first case was that of a man who suffered from neuralgia of the first branch of the fifth nerve on the right side. Quinine was given internally, and veratria ointment was applied externally, without benefit. The action of the gelsemium was here excellent, the patient being perfectly and permanently freed from his pain in the course of three days, five drops only being given every eight hours. A second case was one of brachial neuralgia, a third of sciatica, and a fourth and fifth of trigeminal neuralgia, in all of which the results were satisfactory. On the other hand, however, it failed in a case of hemicrania of long duration, and in two cases of muscular rheumatism. (*Ibid.* No. 31, 1875.)

Gelsemium. Dr. O. Berger (*Centralblatt*, No. 44, 1875,) on the other hand, states that the results of experiments with this drug on patients, both the tincture and extract being used, have been in the highest degree unsatisfactory. The greater number of the patients were the victims of trigeminal neuralgia, partly of peripheral and partly of centric origin, while others suffered from neuralgic pains in different parts of the body, and insomnia. He quite admits that the remedy possesses considerable activity,

various unpleasant symptoms have been experienced by the patient as Vertigo, diplopia, ptosis, difficulty of moving the tongue, stiffness and trembling of the hands, numbness of the fingers, chilliness and general malaise, vomiting, and last though not least, dyspepsia. Even when the doses did not exceed seven grains of the extract.—*Practitioner.*

Sulphide of Calcium, a Remedy for Diabetes. By J. M. Elborough Scatliff, M.B.

Some few days since I was called to see a medical friend (well known to the profession) who was suffering from a localised inflammation threatening to terminate in suppuration. He was also the subject of diabetes, for which he had on a former occasion undergone the usual treatment (bran-bread, etc.) at the hands of an eminent London physician.

Together with the onset of the inflammation above referred to he had an aggravation of all the diabetic symptoms come on, and he was, when I saw him, passing quarts of water night and day (sp. gr. 1028). At my request he tried Dr. S. Ringer's treatment (calc. sulphide one-eighth grain ter die), first in the form of powders mixed with sacch. lactis gr. iij., and afterwards in pills (made by Mr. Cox, of Brighton). He *immediately* experienced great relief. Two days after he was passing only a normal quantity of water (eq. gr. 1023·5), and felt "quite comfortable." He had kept to his ordinary diet, and had not in any way avoided any amylaceous foods at the time.

I find that Garrod speaks of the sulphide of ammonium as useful in diabetes, but only in so far as it "controls the morbid appetite"; but here was a case in which the whole train of morbid symptoms was cut short in a quick and decisive manner by the calcium sulphide.

The inflammation also terminated in resolution, no pus forming. The patient *most emphatically* attributed his relief entirely to the action of the sulphide.

13, Charlotte-street, Marine-parade, Brighton.—*Medical Times and Gazette.*

CANADA

Medical and Surgical Journal.

MONTREAL, JANUARY, 1876.

CORONERS' INQUESTS.

It is far from our desire to serve up to our readers a dish of grumbling and fault finding. These are Christmas times, when peace and good will ought to be the rule—in fact, were it a rule rigidly observed from the 1st of January to the 31st of December in each year, mankind would be all the better for it. Scripture tells us that "it must needs be that offences should come, but woe unto that man through whom the offence cometh." This points to the duty of exposing offences when they do occur.

We have on several occasions complained of the loose manner in which coroner's inquests are conducted in this district. On a recent occasion, a sad occurrence connected with the destruction of valuable life through fire was followed by Coroner's inquiry. This was so thoroughly unsatisfactory as to excite public indignation, and a second searching inquiry had to be gone into before a special jury.

An inquest touching the cause of death of an individual is attended with a certain amount of outlay which has to be borne by the country. That outlay we should be willing to see freely made, provided the Coroner, and his jury render a truthful and reasonable verdict. The object of the Coroner's investigation is to ascertain without doubt the actual cause of death and not a supposed cause. In matters of this kind there should be no speculation, no hasty jumping at a conclusion. A man falls down in the

street and dies, the Coroner holds an inquiry and instructs his jury to bring in a verdict of death through the visitation of God, from disease of the heart. The poor heart which is blamed for causing the man's death has never been examined. The man may have died from any other lesion, but, this covers the ground, it satisfies the Coroner, he is reported to be "such a nice gintleman, so kind and humane, he did not let those horrid doctors cut poor Mike's body all to pieces." A case of this kind quite recently occurred.

A man, whether through accident or design, we know not, received a blow on the head, producing a depressed fracture of the skull. He was brought to the Montreal General Hospital, and there died. An inquest was held, but the man was related to Mr. Alderman Somebody's wife's cousin, and the body was not to be opened. The Coroner put on his double gas magnifying spectacles, and saw through the case at once. The heart was not blamed on this occasion,—it was still the visitation of God; but whether the Coroner had witnessed the visitation from on high or not we are not informed. This is merely one instance of what is almost a daily occurrence. Now, we do think that the Government of the country should issue special instructions to their officials. It would seem that inquests now a days are held merely to satisfy a form of law and put the customary fee into the pocket of the Coroner. In this district at least it is a perfectly useless form in the large proportion of cases, and although we do not think the office should be altogether abolished, yet we might add that if such were determined, we feel convinced that the administration of justice would not in any way suffer, and the country would be saved a considerable outlay.

ANNUAL REPORT OF DISEASES OF THE CHEST,

UNDER THE DIRECTION OF HORACE DOBELL, M.D.

Wh have received a copy of this work, which forms a most interesting and instructive volume of 353 pages. It

is a retrospect of all that has been published, on diseases of the chest, during the year from June, 1874, to June, 1875. We give for the benefit of our readers the advertisement, which occupies the place of preface, and introduces the work to the reader. We may remark that Dr. Dobell published a somewhat similar work in 1869 and 1870. These volumes, however, comprised reports on the progress of practical and scientific medicine in different parts of the world. The scheme was, perhaps, too extensive and fell through. In this work the editor has confined himself to diseases of the chest, and we trust that his efforts will be well sustained by his professional brethren. The work will form an invaluable source of information and reference, and should be in the library of every physician who desires to keep *au courant* with the literature of chest affections.

Advertisement to Vol. 1.

Towards the close of each year will be published a complete *précis* of the year in that Department of Practical and Scientific Medicine which includes the Anatomy, Physiology, Morbid adatomy, Pathology, Diagnosis, Etiology, Materia Medica, Therapeutics, Climatology, etc., etc., of the Thoracic Organs and their immediate associates.

"Dr. Dobell's Reports on the Progress of Practical and Scientific Medicine in different parts of the World," having been discontinued in consequence of the scope of the work making it impossible to confine its extent and expenses within reasonable limits, the original design, as announced in 1868, of a Departmental Report has now been resumed, with some modifications of detail, and arrangements made for a Complete Annual Report on Chest Diseases.

Although the department selected is the widest and most important in medicine, it will be practicable, by keeping within its boundaries, to produce such a complete *précis* of all important work, that these Reports, when collected from year to year, will constitute a most comprehensive,

concise, and reliable book of reference on Chest Disease, and will enable the Medical Practitioner readily to compare the works of different anthors, instead of relying upon those of any one, and to see at a glance thc latest improvements in treatment; while to the Scientific Student they will present an epitome of modern discovery and research.

THE CANADIAN JOURNAL OF MEDICAL SCIENCE.

We have received the first number of a new monthly periodical, published in Toronto, and edited by Drs. W. Ogden and R. Zimmerman. It is very creditably gotten up, being of imperial octavo size, with double columns.

The editors, in their leader, remark that they have made such arrangements as will, they believe, enable them to produce a journal of some value to the Canadian practitioner. It is stated that they have secured able assistants and translators, through whose industry they hope to lay before their readers an epitome of useful and practical matter from British and foreign sources. We fully believe the editors are moved by a true spirit of scientific ardour, and we wish them every success in their undertaking. The great difficulty that we have experienced after twelve years of editorial work is the apathy which is shown by the profession in this country in recording their observations. Like the servant spoken of in the parable, the large majority of our professional brethren prefer to wrap their talent in a napkin and bury it, rather than put it out to gain other talents. Many a life is spent in the acquisition of knowledge, which is not gained by book lore, but by practical observation. Much of that observation is lost, as hardly a death vacancy occurs in our ranks without a positive loss to the whole brotherhood. Literature there is no lack of, but the vast amount of rubbish which is given to the world, is a mere drop in the ocean of unrecorded observations.

We cordially welcome *The Canadian Journal of Medical Science*, and cheerfully place it on our exchange list; and furthermore hope it may be a means of stimulating the profession of this country to well and truly represent Canada in the ranks of literature and science.

JOURNALS RETURNED.

We have received from the Dead Letter Office at Ottawa, quite recently, an official enclosure, consisting of the July and August numbers of the CANADA MEDICAL AND SURGICAL JONRNAL for the year 1874.

The wrappers had been removed, so that there was no means of teiling to whom they had been addressed. Some of our subscribers suffered the loss, which we are willing to supply, but as we do not possess the power of divination, are unable to tell who is the person that has been defrauded of his paper. We may state that there was no post-mark; the JOURNALS were simply enclosed in an official envelope and addresssd, "G. E. FENWICK, M.D., Box 386 P. O. Montreal," and in the corner there is the stamp returned for postage. There is also the Dead Letter Office stamp under date 20th October, 1875, and this precious parcel reached us early in December. Where these two numbers came from? who returned them? to whom were they originally addressed? and why they should take sixteen months in travelling from the Capitol of Canada to this city, a distance of about 120 miles, are questions we are unable to answer.

Patients' Notions of the Clinical Thermometer.

Hospital patients, as a rule, do not clearly understand why the Clinical Thermometer is so frequently introduced to their notice, and their ideas of a temperature chart are usually of the haziest. The following facts gleaned from the medical assistants of one of our Metropo-

litan Hospitals will prove this:—A young woman, who was convalescent, and whose temperature had long remained normal, had a slight relapse, which she attributed to having had "no glass under her arm for a week."—A man suffering from acute rheumatism, obstinately refused to have his temperature taken any more, saying, "it took too much out of him; it was a drawing all his strength away."—A man had been in the habit for some time of having his temperature taken daily under his tongue, with a thermometer that had just been doing severe duty in the axillae of other patients. One night a bran new thermometer was applied to his mouth, next day he declared he was not so well, and said "the glass was not so strong as usual; he felt at the time the taste was different, and it had not done him so much good." A sister in one of the women's wards says that many of the patients think the thermometers are used to detect breaches of the rule against having unauthorised edibles brought in by friends, and she accordingly, does not disabuse their minds of their innocent superstition.—*Students' Journal.*

We have been requested to give publicity to the following announcement, and we trust that Canada will not be behind other countries in sending representative men to attend this very important meeting:

AMERICAN CENTENNIAL CELEBRATION.

INTERNATIONAL MEDICAL CONGRESS.

The Medical Societies of Philadelphia, animated by a just spirit of patriotism, and an earnest desire to unite with their fellow-citizens in celebrating the Centennial Birthday of American Independence, have taken the initiatory steps for the formation of an International Medical Congress by the appointment of delegates from their respective bodies, who were empowered to organize and perfect a scheme for the above purpose. In accordance with the authority thus given the delegation has organized. The Centennial Medical Commission, with the following officers: President, Samuel D. Gross, M. D., LL. D., D. C. L. Oxon; Vice-Presidents, W. S. W. Ruschenberger, M. D., U. S. N.; Alfred Stille, M. D.; Recording Secretary, William B. Atkinson, M. D.; American Corresponding Secretaries

Daniel G. Brinton, M. D., William Goodell, M. D.; Foreign Corresponding Secretaries, Richard J. Dunglison, M. D.; R. M. Bertolet, M. D.; Treasurer, Casper Wister, M. D. Arrangements have been made for the holding of the Congress in the City of Philadelphia, to begin on the 4th and to terminate on the 9th of September, 1876. The Commission propose the following general plan for the organization and business of the Congress

I. The Congress shall consist of delegates, American and foreign, the former representing the American Medical Association and the State and Territorial Medical Societies of the Union; the latter the principal medical societies of other countries.

II. The officers shall consist of a President, ten Vice-Presidents, four Secretaries, a Treasurer and a Committee of Publication, to be elected by the Congress at its first session, on the report of a Committee of Nomination.

III. The morning session of Congress shall be devoted to general business and reading of discourses; the afternoons to the meetings of the Sections, of which there are nine, viz.:

1. Medicine, including pathology, pathological anatomy and therapeutics.
2. Biology, including anatomy, histology, physiology and microscopy.
3. Surgery.
4. Dermatology and syphilology.
5. Obstetricsses of women and children. anddise
6. Chemistry, toxicology and Medical Jurisprudence.
7. Sanitary science, including hygiene and medical statistics.
8. Ophthalmology and Otology.
9. Mental diseases.

IV. The language of the Congress shall be the English, but not to the exclusion of any other language in which members may be able to express themselves more fluently.

Gentlemen intending to make communications upon scientific subjects will please notify the Commission at the earliest possible date, in order that places may be assigned them on the programme.

In order to impart to the Congress a thoroughly international character invitations to send delegates will be extended to all the prominent medical societies in Europe, Mexico, the British Dominions, Central and South America, the Sandwich Islands, the East and West Indies, Australia, China and Japan. Invitations will also be rendered to medical gentlemen of high scientific position; and distinguished visitors may be admitted to membership by a vote of the Congress.

Among the advantages arising from such a convocation as this, not the least important will be the opportunity afforded its members for the interchange of friendly greetings, the formation of new acquaintances and the renewal and cementing of old friendships.

The Centennial Medical Commission tender in advance to their brethren in all parts of the world a cordial welcome, and a generous hospitality during their sojourn in the "Centennial City."

The Congress will be formally opened at noon, on Monday, the fourth day of September, 1874.

The registration book will be open daily from Thursday, Aug. 31, *from* 10 *to* 3 *P. M., in the Hall of the College of Physicians, N.E. cor. of* 13*th and Locust Streets. Credentials must in every case be presented.*

Gentlemen attending the Congress can have their correspondence directed to the care of the College of Physicians of Philadelphia, N. E. corner of Locust and Thirteenth Sts., Philadelphia, Pennsylvania.

There is every reason to believe that there will be ample hotel accommodation for all strangers visiting Philadelphia in 1876. Further information may be obtained by addressing the Corresponding Secretaries.

All communications must be addressed to the appropriate Secretaries.

WILLIAM B. ATKINSON, 1400 Pine Street, Philadelphia, *Recording Secretary.*
DANIEL G. BRINTON, 2027 Arch Street, } *American Corresponding Secretaries.*
WM. GOODELL, 20th & Hamilton Sts. }
RICH. J. DUNGLISON, 814 N. 16th St. } *Foreign Corresponding Secretaries.*
R. M. BERTOLET, 113 S. Broad Street. }

PHILADELPHIA, October, 1875.

The following interesting table has been compiled by **Mr. T. D. King, of this city, from records kept** by the late Dean Bethune.

Year.	Maximum and Minimum New Year's Day.		Mean Temperature Christmas to New Year.	Time of forming Ice Bridge.
1839.....	4	15	8	December 27.
1840*.....	0	13	15	January 14.
1841*.....	5	7	7	January 9.
1842*.....	7	9	16	December 25.
1843*.....	3	6	10	———
1844.....	27	17	24	January 1.
1845.....	38	32	23	December 13.
1846*.....	12	3	18	———
1847.....	28	18	14	January 19.
1848.....	44	32	19	January 20.
1849.....	24	10	23	January 4.
1850*.....	25	3	11	January 4. and December 24.
1851*.....	26	6	7	December 25.
1852.....	19	15	14	———
1853.....	14	4	16	January 20.
1854.....	26	6	7	January 5.
1855.....	16	8	23	No record.
1856.....	20	18	8	January 7. and December 22.
1857.....	28	22	18	———
1858.....	30	18	16	January 21.
1859.....	37	33	11	January 1. † and December 28.
1860*.....	-4	10	-8	———†
1861.....	26	20	23	January 9.
1862.....	35	11	9	January 9.
1863.....	30	12	24	January 21.
1864.....	36	14	17	January 4.
1865*.....	1	3	24	January 13.
1866.....	36	12	23	No record.
1867.....	22	7	18	January 12. and December 18.
1868.....	20	5	16	December 28.
1869*.....	4	2	10	———
1870.....	28	18	30	January 8.
1871.....	20	14	9	No record.
1872.....	31	23	10	No record.

‡ Thermometer registered this January 36° below zero.

† Extremely cold—13 days below zero between Christmas Day and Twelfth Night.

* Years marked thus, minimum temperatures on New Years day below zero.

CANADA

MEDICAL & SURGICAL JOURNAL.

ORIGINAL COMMUNICATIONS.

The Elastic Band in Tenotomy. Successful Case of Operation for Talipes Varus. By A. A. HENDERSON, M.D., C. M., Ottawa, Ontario.

A short time ago, I was sent for to see Willie T.—— a healthy, well developed child, aged twenty months, perfectly formed in every respect with the exception of deformity of the right foot. I was informed that an operation had been performed upon the foot eleven months previously, and that the usual kind of boot for such cases had been worn by him, but without any beneficial result.

Condition Previous to Operation.—Upon examining the foot I found the heel well depressed, the tendo Achillis having been divided at the previous operation. The inner margin of the foot, however, was drawn upwards and the anterior portion twisted inwards to such an extent that at any attempt to walk, the dorsum of the foot pressed upon the ground. I then examined the tendons with a view to operation and found that the tendon of the tibialis anticus was the cause of the deformity, and that in this case it could be divided most easily just above the ankle joint.

On Dec. 3rd 1875, assisted by Dr. Sweetland, I operated without chloroform. The foot was firmly held in position by Dr. Sweetland while I divided the tendon of the anterior tibial muscle above the ankle joint in the usual manner.

The puncture was covered with adhesive plaster, and the foot secured in position by means of a broad strip of plaster placed around it just behind the toes, having a smaller strip inserted so as to form a loop at the outer mar-

gin of the foot, just at the root of the small toe. Another broad band of plaster with a loop formed at its outer portion was placed around the leg above the knee.

These loops were then connected by an elastic band, composed of two pieces of rubber tubing, attached by means of a hook to the loop at the root of the small toe, and by means of a loop with tape attached to the plaster above the knee. The tape was found a great convenience as a means of regulating the amount of tension required from the rubber.

No boot was worn for fourteen days, and during that time the child was not allowed to walk. The sticking plaster was renewed from time to time as it became partially detached, and the tension of the rubber was carefully regulated. At the expiration of that time the child was allowed to walk, but instead of putting on a Scarpa's shoe, I selected a light boot such as is ususally worn by children, and still keeping the band of sticking plaster around the foot, I passed the loop out through an incision which I made at the outer margin of the boot, and hooked the elastic tubing into it. By this means the foot was prevented from turning in the boot. The other end of the elastic was secured to the back of a belt passed around the waist, and kept in position by passing through a keeper situated at the outer and posterior part of a band passed around the thigh. This enabled the child to walk without the possibility of displacing any of the fastenings, and exercised a proper amount of traction, and in the right direction. The child walked readily with the toes everted, and the sole of the foot placed properly upon the ground.

The result of the operation is very satisfactory, and although the elastic is still worn as a precaution, yet without it the position of the foot is quite normal, and its movements are such as they ought to be.

Remarks.—The advantages of the elastic band in the treatment of muscular contraction are marked, and its action in this particular case is very satisfactory. The age of the child necessitated a moderate amount of traction in order

to retain the foot in a proper position, and this was managed by using double tubing.

Having tape attached to one end of the rubber is a decided advantage, as by means of it the power exercised as a tractor can be perfectly controlled. The position of the foot treated by the elastic band can be kept more perfectly under control than can be done by a boot, as any amount of traction required can be obtained in any requisite direction.

The elastic must be worn until the cure is perfected, and apparently but little inconvenience is felt by the child, as the power of standing, walking, or even running seems to be but little interfered with by it.

Ottawa, Jan. 5th, 1876.

Notice of the recent Researches on the Pathology of Small-pox.

By WM. OSLER, M.D., L.R.C.P., LOND., Professor of Institutes of Medicine, McGill University.

The laudable endeavours of Pathologists to obtain evidence of the presence of some of the lower forms of vegetable life in connection with the infectious diseases are being yearly rewarded. In Splenic fever of animals, in Diphtheria, Relapsing fever, Typhoid, and Erysipelas organisms have been discovered which are supposed to have a casual relationship to the diseases in question, though by opponents of the germ theory they are regarded as pathological results or accidental accompaniments.

Within the last eighteen months two investigators, one working at ovine, the other at human small-pox, have shown that this disease must be included in the list, since definite organisms occur in connection with it, and the following brief account of their investigations, chiefly in the author's own words, may be interesting to the readers of this Journal.

Dr. Klein (*Report of Med. Officer of Privy Council*), experimenting upon sheep, produced both a general and local eruption: in the one case by the injection of the virus into the veins, in the other by the inoculation of it under

the skin. The lymph used contained many transparent spheroidal bodies, arranged in groups or in necklace-like chains, together with Micrococci and ordinary rod-shaped Bacteria. On keeping the lymph for some time at incubation temperature (98° Fahr.) the transparent spheroidal bodies divided and sub-divided, producing chain-like aggregations, or long, smooth filaments; the product in either case bearing a striking resemblance to the dense net-work of filaments forming the mycelium of the common fungus.

Dr. Klein describes the process in the local eruption as beginning in the *rete mucosum* and papillary layer of the corium by an enlargement and germination of the cellular elements in these localities. Then the lymph spaces in the corium became dilated, more distinct, the lymphatic vessels originating from them being readily traced owing to their distension. About the third day, spheroidal bodies like Micrococci, and branched filaments made their appearance in the dilated lymph vessels of the corium, and in a few days the process had advanced to such a degree that almost all the lymphatics in the affected part were filled with a fungus-like growth, consisting of a dense felt-work, or mycelium, the undivided filaments of which broke up at the ends into conidia or spores. While this was going on a precisely similar growth took place in the cells or cavities which form in the *rete mucosum* at the time of vesiculation. The process attained its height before pustulation came on, and was identical in the pocks of the general eruption.

Dr. Weigert, of Breslau, working at the subject in man, describes first the appearances in the skin, and then in the internal organs (*Centralblatt, f. d. Med. Wiss. Feb.* 27,—*Dec.*, 1875). In the former situation Bacteria were always found in the neighbourhood of the pocks, sometimes directly under the central degenerated parts, occurring in sharply bounded tubes with an endothelial lining; but whether these were lymph or blood vessels could not be decided. In addition larger and smaller colonies, more diffusely arranged, were present. They were only found in the early stages before profuse suppuration came on.

In the internal organs, Liver, Spleen and Kidneys, the author describes small, sharply bounded, tubular structures filled with Bacteria, identical with those found in the skin. The cells in the neighborhood of these degenerate, their nuclei disappear, and small groups, about the size of miliary tubercles are formed. This is in the early stage of the disease. Suppuration takes place later with disappearance of the Bacteria.

Dr. Weigert is inclined to regard these as structures analagous to the pocks on the cuticle, and believes that for the first time proof is here offered in an acute exanthem of a process going on in the internal organs similar to that in the skin. As far as can be gathered from the account, the Bacteria correspond rather to the Micrococci occurring in Diphtheria than the rod-shaped forms of putrefaction.

The author is of opinion that the destructive effect of the Bacteria is due to some chemical action on the tissue causing necrosis of the cell elements, while inflammation with suppuration follows as a secondary effect.

The two accounts which we have here of the pathology of ovine and human small-pox (in their essence similar) are by no means concordant. In the one we have a remarkably full and clear description of the development of an organism going hand in hand with the development of the lesions characteristic of the disease, and it seems hard to believe that the relationship between the two is not that of cause and effect. In the other, human small-pox, the account is much less complete, and though tube like aggregations of Micrococci occur, like those described by Dr. Klein in the ovine disease, we have no record of the growth, development, and fructification of these bodies. Nevertheless these form most valuable contributions to our knowledge of the intimate Pathology of this disease, and Dr. Klein's research especially places the germ theory on a basis which heretofore it has not possessed.

The Antipyretic action of Salicylic Acid.

Dr. Fürbringer (*Centralblatt, f. d. Med. Wiss. No.* 18, 1875,) found that the administration of this remedy in health to guinea pigs and men caused no deviations in the temperature.

In septic fever, artificially produced in guinea pigs, salicylic acid caused a marked reduction in the temperature, the effect in most of the cases being evident in from 2–6 hours after the administration of the medicine. In inflammatory fever produced artificially in the same animals the results were not so striking, but the experiments were few in number.

Dr. Buss (*Centralblatt, No.* 18, 1875,) in a short notice strongly recommends salicylic acid for its antipyretic action, alone, and in combination with quinine ; and states that it possesses no unpleasant peculiarities, such as causing collapse, delirium, &c. He gives it in doses, according to the intensity of the fever, from 4–8 gms (3i–3ii) at a time, and has so employed it with the best results in typhoid fever, erysipelas, and acute rheumatism.

Moeli (*Berl. klin. Wochenschr, quoted in Centralblatt, No.* 53, 1875,) states that the sodium salt of salicylic acid, which according to Kolbe's investigations does not possess antiseptic properties, acts in a remarkable manner as an antipyretic, both in infectious and inflammatory fevers.

4–5 gms is sufficient in light cases to produce a great reduction in the temperature ; in severer cases it is necessary in order to obtain a temperature reduction of 1. 5—3 ° C to repeat the dose in a few hours (4–16). The action is more intense if the remedy is taken at the time of the spontaneous temperature reduction. Commonly the antipyretic effect lasts 24 hours, and in about half the cases the fall in temperature is accompanied with copious sweatings. The author has never observed any evil consequences follow the administration.

Occasionally transitory vomiting came on, but no furthur gastric or intestinal troubles.

The medicament proved active also when given by the rectum in larger doses, less so of course than when administered by the mouth. A prompt effect was evident with subcutaneous injections, in spite of the inconveniently large quantities which had to be injected. Of six healthy persons who had each taken 4 gms in concentrated solution, three vomited, the rest remained wholly unaffected; likewise three others who had taken similar doses per anum.

Wolffberg (*Deutsch Arch. f. klin. Med. quoted in Centralblatt No.* 53, 1875) finds, from experiments in Ziemssens clinic, that in typhus the salicylic acid, taken in single doses of 4 gms, only exceptionally reduced the temperature; with 6 gms it did so as a rule, but only transitorily; while the continual use of 2 gms daily in watery solution had no effect whatever. From these results the author ventures to conclude that to salicylic acid only a slight and untrustworthy antipyretic action must be ascribed. The author advances a number of facts to show that the administration of salicylic acid in substance, either in powder or suspended in water is not, as Buss (see above) maintains, without risk. One patient to whom 2. 5 gms had been given in powder, so that it was with difficulty swallowed showed on the next day a hæmorrhagic Pharyngitis. The post mortem examination of two typhus patients who had taken the powders revealed numerous hæmorrhagic erosions in the mucous membrane of the stomach, which in one of the cases extended into the duodenum. Similar appearances were found in the bodies of three patients who died of phthisis, to whom, *experimenti causa*, in the last period of life salicylic acid in powder had been administered. A dog also to which 2 gms of salicylic acid enveloped in bread was given, and in addition an injection of 2 gms to 40 of water, had after death numerous hæmorrhagic ulcers in the stomach, duodenum, and rectum.

Choral-hydrate in Ozena.

A solution of chloral-hydrate in water in the proportion of 2 parts to 250, is highly recommended in Ozena. It is employed by irrigation.—*Pacific Med. and Sur. Journal.*

Hospital Reports.

MEDICAL AND SURGICAL CASES OCCURRING IN THE PRACTICE OF THE MONTREAL GENERAL HOSPITAL.

Case of Cirrhosis of Liver. Under DR. ROSS. Reported by MR. R. L. MACDONNELL.

P. M., æt. 61. Admitted Oct. 31, 1875, a very stout, plethoric individual. For last 3 months has had swollen feet, cough, dyspnœa, and brickdust deposit in urine. A month ago had ascites, which was soon followed by icteroid discolouration of skin and conjunctiva. Within the last two or three days has had hœmatemesis, and last night was delirious. Bowels have been rather loose and urine scanty.

Family history excellent. Has never had syphilis. Has been a very hard drinker for last five years.

Dull and stupid manner, voice thick ; not at all inclined to answer questions or impart information. Skin and conjunctiva moderately jaundiced. Respiration hurried and difficult, little cough or expectoration. Moist rales over the right lung and base of left, dulness at both bases.

Pulse 124, moderately full and very compressible. Heart healthy ; tongue moist and brown ; no appetite ; frequent hæmatemesis, but not involving much loss of blood. Bowels loose, fæces greenish and watery, lower extremities œdematous. Abdomen much enlarged. Fluctuation well marked from side to side. When supine position assumed clear percussion in umbilical and hypogastric regions. Dulness varies with position, superficial abdominal veins enlarged. Passes urine and fæces involuntarily. Urine is scanty in amount, of a dark colour, acid reaction, sp. gr. 1020, and deposits very little sediment at all, contains no albumen, blood or bile pigment.

Ordered. ℞ Inus. Digitalis ℥ii every 4 hours.

Nov. 1st. Delirious last night. Breathing becoming stertorous. Frequent vomiting of blood. Pupils contracted.

Involuntary passages of urine and fæces. Pulse 120, weak and compressible. Ordered Pulv. Jalapae Co 3i statim.

Nov. 2nd. Died at 4 A.M.

Autopsy. Eight hours after death. Heart and pericardium healthy. Pleuræ adherent at many points. Right lung intensely congested except at upper lobe. Left lung congested at lower lobe. Mucous membrane of stomach reddish and congested. Abdomen contained five quarts of ascitic fluid. *Liver* capsule opaque, closely adherent. Surface light yellow in colour, covered with small protuberances of different size. Organ itself hard, tough, and leathery, much reduced in size and weight (2 lbs. 10 oz.) Gall bladder partially filled with greenish bile. Spleen enlarged and congested (weight 14 oz.) Kidneys, slightly congested. Capsule non-adherent. Surface mottled with minute echymoses. One or two small cysts.

Case of Cirrhosis of Liver.—Under DR. ROSS. Reported by Mr. R. L. MACDONALD.

Jacques Archer, æt 42; admitted October 28th, 1875, a painter.

Has never been ill until about a month ago, when he noticed slight puffiness about the ankles, followed immediately by progressive enlargement of the abdomen. About twelve days ago the urine became scanty and of a bright red colour, with a large deposit of lithates and lithic acid. Four days ago had a slight attack of hæmatemesis. Has never suffered any pain. Now and then has had a little bleeding at the nose. Coughed a good deal before admission. Bowels have been irregular. Had gonorrhœa and syphilis about twenty years ago, not followed by evil consequences. Family history excellent. Though he strenuously denies it, he has probably been a very intemperate man.

Present Condition.—Skin dark but not jaundiced. Pulse 92, small compressible; cough trifling. Expectoration

small in quantity, mucous. No dyspnœa. Lungs healthy. Heart quiet. Cardiac dullness normal. Systolic murmur rough in character, loudest at base and prolonged up the aorta. Pulsation at wrist barely visible. Tongue clean. Appetite fair. No nausea or vomiting. Bowels rather confined. Abdomen immensely distended. Superficial abdominal veins prominent. The swelling fluctuates, bulges at sides, and is dull on percussion, except at upper part, where a tympanitic note can be elicited. This area of clearness changes its site with the patient's position. Hepatic dulness normal. Spleen not perceptibly enlarged. Urine scanty, bright red with a large deposit of lithates, acid in reaction. No blood. No albumen. No bile pigment. Sp. Gr. 1020.

Ordered pulv. Jalapæ Co. ℥i statim.

Oct. 30th.—Has been thoroughly purged by the Jalap. Abdomen more lax; more comfortable. Amount of urine passed in 24 hours, 24 oz.

Ordered: Infus. Digitalis ℥ii ter in die. Also 4 oz. Claret.

Oct. 31st. Tongue moist and slightly coated. Bowels confined. Urine 16 oz.

Nov. 3rd. — Ordered: R. Potassæ Ascetatis ℥iv; Tr. Scillae ℥vi; Infus. Digitalis ad ℥vi; ℥ ss ter in die.

Nov. 4th—Bowels loose. Urine 16 oz. Deposit considerably diminished.

Nov. 5th—Urine 27 ounces.

Nov. 7th—Two friends of the patient came to see him in the afternoon, and brought him two pint bottles of claret. He hid them in his bed, and at about 10 p.m. drank about a bottle and a half. He became extremely drunk, went out to the watercloset, and on his way back to bed was attacked with profuse hæmatemisis. He died a few minutes afterwards.

Post Mortem.—Twelve hours after death. Cadaveric rigidity extreme. Face livid. Conjunctivae injected. Nose flattened from previous fall. Membranes of brain congested. Small quantity of subarachnoid effusion. Brain normal.

Pleurae slightly adherent above and below. No effusion. Lungs moderately congested, particularly at right base. Crepitant throughout. Pieces from all parts floated in water. Red, frothy serum exuded from cut surfaces. Pericardium contained a few drachms of fluid. Heart flaccid. Auricles full of dark coajulated blood. Left ventricle hypertrophied and a little dilated. Mitral valve slightly incompetent, and thickened. Aortic valves healthy. A flattened plate of calcareous matter, as large as a five cent piece, attached to inner surface of aorta, immediately above one of the semilunar valves; similar calcareous plates along the thoracic aorta. One, particularly large, at origin of the subclavian artery. Abdomen ascitic, the fluid measuring eight quarts. Peritoneum pinkish and congested. Long strings of lymph floated free in the fluid. LIVER (weight 4½ lbs). Capsule thickened and whitish, adherent to diaphragm and adjacent viscera; vessels of broad ligament enlarged and gorged with blood, one vein being particularly prominent. Surface of the gland of a moderately dark brown colour, studded with hard protuberances which combined to give it a puckered appearance. Hepatic substance on section hard and tough, shining white lines of connective tissue between irregular masses of dark brown lobules. The surface of a section altogether reminds one somewhat of the appearance of a slice of dark-coloured castile soap.

SPLEEN (7 oz.)—Capsule extremely thickened, with large white indurated patches. Substance congested. Omentum gathered together into finger-like lobules, binding the liver, stomach, spleen and pancreas into one mass, rendering it a difficult matter to separate one organ from another. STOMACH empty, contracted. No sign of congestion or inflammation except at cardiac orifice, where there was rather deep capillary congestion. Intestines healthy. Appendix vermiformis unusually long. Kidneys (6 oz. each). Capsule non-adherent. Surface smooth. Deep red on section, congested. Pyramids widely separated. Left kidney of an unusual triangular shape.

Case of Fracture of the bodies of the 4th and 5th dorsal Vertebrae—Complete paraplegia — Recovery. Under Dr. Ross. Reported by Mr. C. N. STEVENSON.

Louise L. aged 17, housemaid, was admitted into the Montreal General Hospital on 28th Sept. 1875, with loss of power in the legs, the result of a fall. It appears that on the 26th Sept. she was engaged washing windows in the second story of a house looking out upon a garden, when the ladder on which she stood gave way and she was precipitated to the ground. She thinks she was not stunned or rendered unconscious, and insists that she fell face downwards, striking violently upon something directly across the pit of her stomach. She tried to rise but could not and had to be lifted and carried into the house—She was very shortly after seen by a neighboring physician who found her completely paraplegic, the bladder also being involved. He had fly-blisters applied on the spine and to the backs of the legs.

On admission, there was complete loss of sensation and motion in both legs—there was also paralysis of the bladder and consequent retention, which had already necessitated the employment of the catheter. On examination of the vertebral column, very decided prominence was to be observed opposite the situation of the 4th and 5th dorsal vertebræ. Pressure in this situation was found to be exceedingly painful, causing at the same time sensations as of pins and needles running through the body in different directions. She has large blistered surfaces down the back and on the calves of the legs. These sores were dressed with zinc ointment—she was ordered an air bed, and to be cathetered twice daily.

Sept. 30th—Rested badly. Suffers a good deal of pain in the back. Pulse 125.

Oct. 3rd—Has had no movement of the bowels, still requires daily catheterization. Pulse 108. Ordered an enema.

Oct. 6th.—In spite of the air-bed, a slight bedsore is forming on the left nates. It was dressed with soap plasters. Pulse 108.

Oct. 10*th.*—Pulse 108. Temp. 100 5 a.m., 100 5 p.m.

Oct. 11*th.*—Early this morning had a rather severe rigor. Temp. 102 3-5 a.m., 100 4-5 p.m. Pulse 130. Rather more pain over seat of fracture. Ordered Emp. Bellad. to the back.

Oct. 12*th.*—Pulse 106. Temp. 99 1-5 a.m. 100 p.m. Has some incontinence, urine escaping involuntarily in bed.

Oct. 16*th.*—Pulse 88. Temp. 98 2-5. Has regained power over bladder and passes water voluntarily. Has also begun to regain some degree of power in her limbs.

Oct. 18*th.*—Improving. Is now able to turn over herself on either side—can move the toes and slightly raise either leg from the bed. Has more power in the left leg than the right.

Oct. 20*th.*—Urine passed easily and voluntarily. Bowels moved naturally without assistance. The bedsore and all the blistered surfaces are quite healed.

Oct. 25*th.*—Rapidly regaining power in the limbs. Was allowed to sit up in a chair for a short time to-day. Was ordered Pil. Rhei Co iij.

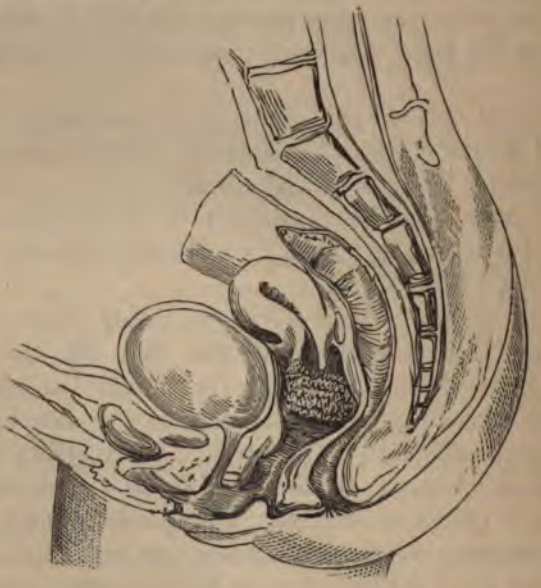
From this time improvement was steady and continuous in every respect, and by the 20*th Nov.* she was able to stand and walk with slight assistance. Rapid advancement followed this and she was soon able to walk firmly without assistance and feels perfectly well. The vertebral prominence is as distinct as it was at first but free from all tenderness and quite consolidated. The deformity gives an odd appearance as though the shoulders were unnaturally square and the head somewhat sunk between the shoulders—was discharged cured 24th December.

Case of Papillomatous Tumour of the Cervix Uteri, Removed by Galvanic Ecraseur. By DR. FENWICK. Reported by J. D. CLINE, B.A., M.D., Assistant House Surgeon, Montreal General Hospital.

A. S., aged 28, married, by occupation a laundress, tall, stout, well-developed woman, was admitted into hospital on

Dec. 20th, 1875. Had always been strong. Never knew what it was to be sick. Had one child four years ago, and never been pregnant since. Had always been regular in menstruation until two months ago when she became unwell and remained so ever since. Hæmorrhage had been so great lately that she felt herself getting weak, and was subject to fits of giddiness. She had never suffered any pain till lately ; she had pain in her back and down her thighs.

On examination with the finger immediately felt a mass as large as a hen's egg, flat in surface, which was rough and



rugged, growing from the anterior lip of the cervix, its attachment being broad and sessile, the whole lip being much enlarged and thickened. The posterior lip and os uteri could be felt behind the growth by tilting it forward. The examination caused no pain. Upon introducing Sim's Speculum the growth was brought into view. The surface of it was covered with a bloody and slimy discharge, the removal of which disclosed a rough, ragged-looking surface

not so from ulceration but from enlarged papillae. The tumour lay somewhat obliquely across the bottom of the vagina, completely hiding from view the os and posterior lip.

Dr Fenwick judged from its appearance, the age of the patient and her general condition, that it was not malignant, but a benign papillary growth, and decided to remove it. This he did by the galvanic Ecraseur. Passing the loop of platinum wire around the tumour as high up as possible, he connected it with the electric conductors of a four-celled battery. The tumour came away in about two minutes, leaving a smooth, charred stump, without a drop of blood. The sides of the vagina were a little burnt, by the heat of the canulla through which the wire passed. This on another occasion could be avoided by winding silk around the canula. The patient had no bad symptoms after the operation. Now, at the end of three weeks, the sloughs have separated and the stump is rapidly healing. The discharge is very slight. It was rather offensive for a time for which injections of Condy's Fluid were used. The tumour was examined by Dr. Osler who pronounced it to be not malignant but to consist of hypertrophied papillæ, connective tissue and blood vessels.

Fracture of the Ulna, with dislocation forward of head of Radius.

W. S., aged 22, was driving a butcher's cart, when the horse ran away and he was pitched out against a hydrant, the fore arm, which was flexed, striking the hydrant near the elbow. When brought to the hospital we found a fracture of the ulna, about two inches from the point of the olecranon, and a prominence in front of the point on the radial side. The patient could not flex the forearm. The head of the radius was readily returned to its proper position and retained there as long as the arm was well flexed. A posterior splint of gutta percha was applied, bent at an angle of about 50°, and a straight anterior splint was ap-

plied to the forearm. The hand was kept to the opposite shoulder by a triangular sling, and the whole arm steadied by a broad bandage. The patient was found to be syphilitic. He had a large serpginous sore on left leg, and another on the fractured arm, and sores of the same character on his head, and nodes on both tibiæ. He had contracted the primary sore four years ago, and eight months afterwards secondary eruptions and sore throat, with nocturnal pains in his bones. Proto-Iodide of Mercury Mixture was ordered for this syphilitic affection. In three weeks the splints were removed altogether, when tolerably firm union was found at the seat of the fracture. Passive motion was used, and in another week the motion of the joint was very good. He was now discharged with instructions to use the arm and apply friction. The syphilitic sores were by this time almost healed.

Case of Peritonitis. Calcareous concretion found in Appendix Vermiformis with perforation of it.

W. S., aged 22, an ostler by occupation, was admitted into hospital on the evening of Tuesday, January 18th. He was a thin, spare man; had been in the habit of 'getting on sprees' frequently. On Saturday had had a chill, having been perfectly well before this. The chill was followed by a good deal of fever, pain in head, back, and thighs, and sickness at stomach. He had also complained of pain across lower part of abdomen, not well defined. On examining him after admission, found his tongue a good deal coated; pulse, 104°; temp. 104 2-5°. A good deal of tenderness in right illiac fossa, where no swelling was detected. Ordered a draught of Liq. Morph., and a linseed poultice over abdomen.

Jan. 19.—This morning found him very uneasy with pain in the region of bladder and extending down into testicles, and a great tenderness in same region, and frequent desire to micturate, but passing small quantities of urine, which

was very dark and with no dsposit. Pulse 96, and soft; temperature 101°. Poultice to be continued, and the draught if necessary Towards night the pain and tender ness was becoming excessive, and he vomited several times. The symptoms of general Peritonitis were now evident. I stopped the mixture, and ordered pulv. opii. gr. i. every three hours, and gave him at the time a hypodermic injection of gr. ¼ of Morphia. Evening temperature was 102°; pulse 120, short and sharp.

20th.—Morning temperature 101°; pulse, 130, very wiry; expression of countenance very anxious; cold sweat on his forehead; vomiting worse, vomited matter being yellowish green. Tenderness of abdomen very great, and abdominal walls very hard; could scarcely bear the weight of poultice. I now gave him instead of opium, by mouth, Morphia gr ¼, hypodermically every two hours; ordered a sinapism to epigastrium, and ice by mouth with milk, which had been his only diet throughout, in small quantities frequently.

At 1 p.m., Dr. Fenwick saw him, and ordered champagne by mouth, but made no further change in the treatment. His arms were now cold up to the elbow. The champagne he sometimes retained, and sometimes rejected. Towards night I gave him Sod. Bicarb. grs. 5, and Acid Hydrocyanic dil mij every two hours, and continued the morphia injections every 2 hours. Temperature this evening 99 2-5°; pulse 140.

21st.—Towards morning he vomited very little and slept some. Temp. 198 2-5°; pulse 140. His pupils, notwithstanding all the morphia he had taken, were not very much contracted. Through the day he became at times slightly delirious and would attempt to get out of bed, but was easily quieted. At 5 p.m., just after I had left the ward, he suddenly became furiously delirious, could scarcely be held. Snapped at my hand with his teeth. At the same time his pulse became almost imperceptible and his pupils widely dilated. After a furious paroxysm of about two minutes, he sank back and died at 6 p.m.

AUTOPSY 36 hours after death. Found a quantity of purulent fluid in the cavity of the peritoneum, and signs of inflammation of this membrane all over it, particulary in the neighborhood of right illiac fossa, where the intestines were covered with a very thick layer of fibrinous exudation. appendix vermiformis was adherent to the wall of abdomen, where there were the remains of a small abscess. On detaching the appendix found a sloughy perforating ulcer about the middle of it, and the lower half black and gangrenous. Just above the ulcer could feel a hard mass about the size of a bean. This mass when examined was found to consist of layers of what appeared to be hard fæcal matter, with a hard, gritty nucleus about as large as a split pea, which effervessed on the application of an acid. There was great venous conjestion of the membranes of the brain, which itself appeared normal.

Correspondence.

SHERBROOKE, Jan. 22nd, 1876.

To the Editor of the Canada Medical and Surgical Journal.

SIR,—I send you for insertion in the JOURNAL the following paragraph from a letter written by a Medlcal Practitioner in the Eastern Townships, and published over his signature, in the columns of a local newspaper of large circulation. Being so published I think I am right in regarding the suggestion it embodies as professional property.

"Within a short time it has, I find, been industriously rumored that at the time of the accident which caused his death, Mr. C. was intoxicated. Now, I can most positively assert this is not the case; I was the first medical man who saw him and dressed his wounds, and in order to convince myself of the nature of the injury the brain had evidently received, I carefully examined (twice) the patient's breath, and though I am glad to say my sense of smell is patricularly acute, I was unable to detect the slightest trace of alcoholic flavor."

I have heard of "smelling a mice," but I never heard of

any of the great Fathers of Medicine, suggesting the *examination of the breath*, in order to ascertain the *nature* of an *evident injury of the brain!* It was reserved as the crowning glory of the last days of 1875 to promulgate, thus modestly, this inestimable discovery.

The idea is an original one, and deserves to be "*carefully examined* (*twice*)!" Of course a particularly acute sense of smell is indispensible; to ascertain the exact nature of the brain injury,and to distinguish between it—and alcoholic "*flavor!*"

I am, &c.,

E. D. WORTHINGTON.

Reviews and Notices of Books.

A Practical Treatise on Fractures and Dislocations. By FRANK HASTINGS HAMILTON, A.M., M.D., LL.D., Surgeon to the Bellevue Hospital, New York, Consulting Surgeon to the Hospital for ruptured and cripples, &c., &c. Fifth edition, revised and improved; illustrated with three hundred and forty-four wood cuts; 8 vo. pp. 831. Philadelphia, Henry C. Lea, 1876.

This treatise first saw light in 1860, and since that period has deservedly occupied a prominent position as an athority on the subject of Fractures and Dislocations. It is undoubtedly the most reliable treatise on this subject in our language. Throughout it will be seen that the author has been a careful and painstaking observer, a faithful and conscientious seeker after truth, The record he publishes is an accurate and unvarnished tale. In keeping before the professional world this very excellent treatise, the author has been no idler, the subject has been to him one of more than ordinary interest, and from what he has produced we judge that much time has been devoted to the subject. It is no mere book compilation, while the author gracefully gives to

others their proper share of recognition, he at the same time records the observations he has himself made both in hospital and private practice.

The present edition has been considerably enlarged and has received an addition of twenty-two illustrations on wood. The author has brought the work down to the present time, embodying many observations of practical surgeons, both European and American. In his report the subject of the diagnosis and treatment of fractures and dislocations has received some modifications. Dr. Hamilton very properly remarks that "there remains much to be accomplished, so much indeed, that no one who thoroughly understands the facts, and feels an interest in this branch of our science, will rest satisfied with what has been done, and hereafter cease to labor." Indeed the perfection in aparatus for the treatment of fractured bones has not been fully attained, nor is it attainable, although mechanical skill has done much to the imprrovement of aparatus for these lesion.

To the practical surgeon this work is an indisputable necessity, its teaching is reliable, and the style plain, clear and very readable.

The Histology and Histochemistry of Man. By HEINRICH FREY. Translated from the fourth German edition by ARTHUR E. J. BARKER of Dublin. With 608 illustrations. 8vo., pp. 683. Appleton & Co., New York.

This is another of the many valuable translations of German medico-scientific works that have within the last five years issued from the English and American press. The author, Prof. Frey of Zurich, is well and widely known as an able and original investigator in Histology, and for some years past German students have had the advantage of two excellent manuals from his pen. One of these, "The Microscope," also translated into English, is a com-

plete hand-book of microscopic manipulation, entering fully into all the modern methods which have aided so much in the advancement of the science, and is moreover copiously illustrated. The other, the subject of the present notice, deals only with the chemical and histological elements of the body and the structure of the compound tissues, giving an exhaustive account of each, without touching upon the details of preparation.

The work opens with a short history of the origin and progress of microscopical science, containing useful references to the chief investigators and their works.

The consideration of the elements of composition is first taken up, a description of the members of the different groups being given in order. This part of the volume will be specially welcome to English students, as it contains a short plain account of the various organic chemical compounds, accompanied, where needed, by excellent figures.

There is nothing calling for particular comment in this section; the views given are those current among physiological chemists, and the author has wisely refrained from recording any but the essential facts relating to the subject.

By far the largest portion of the book is occupied with an account of the elements of structure and of the tissues of the body.

A description, one of the best we have ever read, is first given of the cell, its modifications, characteristics, and methods of increase.

The subject of the blood receives the consideration that its importance demands, and is treated physiologically as well as histologically, the process of coagulation being fully described, and an excellent account of the development of the corpuscles given.

The tissues of the body are then taken up in order, full justice being done to each. The explanations are clear, the figures abundant and very well executed. The section relating to the structure of striped muscular fibre contains references to the numerous recent theories, and the illus-

trations are remarkably good. We are glad to see that, with very slight modifications, the views of Mr. Bowman are adopted.

The organs of the body are considered last, and dealt with in the same admirable manner. The kidneys receive particular attention, and this portion of the work is profusely illustrated.

With reference to the wood cuts we may remark that there is a great deal of needless repetition. Many of them occur two or three times, and in the description of the lymphatic glands we actually have within eight pages four duplicate figures, two of which face each other.

The work as it stands is the best text-book of Histology we now possess, and one we can cordially recommend to those wishing to acquire a thorough knowledge of the science.

Periscopic Department.

SURGERY.

The Anatomy and Physiology of the Two *Principal* [illegible] By WILLIAM MACCORMAC, F.R.C.S., Surgeon to St. Thomas's Hospital.

In the [illegible] for 1872, vol. 55, will be found a most interesting paper by Mr. Maccormac, on an unique case, in which [illegible] performed resection of the [illegible] at the same time. The [illegible] was one of the cases [illegible] which took [illegible] the removal [illegible] Mr. Maccormac's paper [illegible] as well as [illegible] [illegible] [illegible]

sequently, I was able to describe to the Society the then condition of the limb in the following words. "The elbow is thoroughly healed, and the ulna so far reproduced that there is scarcely any appreciable deformity or loss of shape in the joint. He can flex and extend it, and also pronate and supinate the forearm. The power of the hand is being rapidly and completely regained," The shoulder was not, however, in so satisfactory a condition, as the upper part of the humerus had become necrosed. St. Aubin wrote to me from time to time, and told me it was proposed to remove the dead bone, but he wished me to perform the operation, I therefore invited him to come over and be a patient in St. Thomas's Hospital, which he did. When, however, I arranged to extract the sequestrum, he alleged violent home sickness, and returned abruptly to France—taking, in fact, French leave of us. At the end of the communication. already quoted from, will be found the following sentence. "I can entertain no doubt that, as soon as the necrosed piece of humerus is removed,the sinus in the region of the shoulder will close, and the usefulness and power of the limb become greatly increased." This forecast has recently received a gratifying realisation, as shown in the accompanying translation of a letter on the subject, which M. Serazin, under whose able care the man has lately been, has very kindly sent me.*

"I wish to complete, in a few words, the case of St. Aubin, related in your *Recollections of an Ambulance Surgeon*, translated by Morache. This man was sent to me to Bourges some weeks ago by my friend General the Marquis de Galliffett. I found, in the upper third of the arm, at the outer border of the biceps, a fistulous opening leading to a cloaca, whence flowed an abundant and fœtid suppuration, kept up by a sequestrum. This sequestrum appeared immovable; but, considering the nature and duration of the lesion, it was evident this immobility was

* St. Aubin wrote me at the same time to express his gratitude in a hand writing which excited my envy, saying, he was returning home the following day, a cured man, and promising to send me his news every New Year's morning.

only apparent. The lower part of the arm was red and swollen. I made an incision of 8 *centimètres* (3¼ inches) along the outer border of the biceps, which allowed a trephine to be applied twice to the surface bone below the cloaca, and when the window thus formed was trimmed with the gouge, a sequestrum 11 *centimètres* long (4½ in.) was withdrawn. It formed an osseous tube, bevelled obliquely at both extremities, rough on its surface, perforated in places, and formed of the internal layers of the compact tissue of the shaft. A glance suffices to show that the sequestrum is the result of a suppurative myelitis, which has probably caused the death of the inner layer of the diaphysis throughout the greater part of its length; for, as St. Aubin says himself, a sequestrum quite similar in appearance, having the form and dimensions of a *pipe Belge*, was extracted some months before at Bourbon Lancy, and this presented, at its upper extremity, the traces of having been cut with a saw. The result of my operation has been most satisfactory. At present, the suppuration is insignificant and free from odour. I believe that this courageous fellow is for the future free from any chance of surgical interference; and he preserves, thanks to you, a very useful [illegible] arm.—SARARIN, Ex-Professeur Agrege de la Faculte de Strasbourg, Médecin en Chef du Huitième Corps.—Bourges, Dec. 11th, 1875."

I need only, in conclusion to this very interesting communication, echo the belief of Professor Samarin, and express my sincere hope that this really brave fellow will, for the remainder of his life, enjoy as he well deserves, the advantages of a use[illegible]—*British Medical Journal*.

[illegible] Operation. Rapid Cure. Under the care of Mr. JOHN CHATTO, [illegible].

The following case is one of which we are indebted to Mr. [illegible], resident obstetric assistant, is interesting as illustrating [illegible] at the Infirmary of the Over-

rence of inflammation of the cyst after the operation of tapping; and, secondly, the comparative safety of ovariotomy after the supervention of inflammation. It must, however, be borne in mind that this case, and others like it, are exceptional, and must be regarded as such—that is to say, the fact that inflammation may occur after tapping is not an indication that the major operation of ovariotomy should in such cases be practiced in the first instance.

A. S——, aged fifty-two, widow, was admitted on Nov. 9th, 1875. The patient always enjoyed good health until the present illness. She has had three children, the youngest nineteen years of age, and no miscarriages. Menstruation was regular till two years ago, when it ceased. About eighteen months before admission, while in the enjoyment of perfect health, she perceived a small movable substance in the right iliac region. This swelling, however, she said, disappeared. In February, 1875, she had a somewhat sudden attack of severe pain in the right side of the abdomen, for which she obtained medical advice. After this the abdomen rapidly enlarged, and an ovarian tumour was diagnosed. In August this tumour was tapped by her medical attendant, and a pailful of clear, gelatinous fluid withdrawn. Towards the end of October, the abdomen had become as large as when tapped, and she applied for admission into the hospital.

When admitted she was emaciated, the face was pinched and of an anxious expression; she complained of anorexia and nausea, difficulty of breathing, a constant cough, and œdema of the lower extremities. The abdomen was enormously distended, the superficial veins enlarged, the surface smooth and uniform, and there was tenderness on pressure in two or three spots. There was dullness on percussion in front, and resonance in the flanks, with distinct fluctuation. The fluctuation could be felt within a number or limited areas only, which showed the cyst to be compound.

The abdomen measured at the umbilicus 41½ inches, and two inches above this 40½ inches in circumference; from

the umbilicus to the ensiform cartilage 8½ inches, to pubes 11 inches, to right anterior superior spine 12½ inches, to left anterior superior spine 13 inches. Urine was healthy, sp. gr. 1030.

A vaginal examination proved the uterus to be of its natural size. slightly drawn upwards, and anteflexed. Temperature of body normal.

On Nov. 17th she was again tapped, and 160 ounces of straw-colored gelatinous and alkaline fluid of sp. gr. 1021, removed. Subsequently the chest symptoms were much relieved, and the œdema of the legs disappeared, but she complained of an acute pain in the right iliac region, and of great tenderness on pressure. The abdomen again became distended to about the same size as on the 17th, before she was tapped, The pulse became more frequent, and the temperature increased.

Suspecting inflammation of the cyst, Mr. Clay deemed it advisable to remove the tumour as soon as practicable, and on Nov. 27th the operation was performed. Ether having been administered, an incision was made five inches in length, below the umbilicus, in the median line. There was considerable hæmorrhage from some superficial veins, but it was arrested before the peritoneum was opened. The walls of the cyst were very thin, and gave way under the traction made by the hooks of Wells's trocar. The patient was then turned on her side, and the fluid evacuated by pressure on the abdomen. After securing the slight adhesions that existed on the right side and in front, the pedicle, about four inches in length came into view, was fixed with a clamp, and cut. A large cyst remained, which gave way whilst being withdrawn with the vulsellum forceps, and its contents, about 18 oz. of purulent fluid, escaped, but fortunately, owing to the patient being on her side, none was allowed to enter the peritoneal cavity. The tumour was then freed from the remaining adhesions, and easily withdrawn. The tumour proceeded from the right ovary.

The wound having been closed with deep and super-

ficial sutures of silk and wire respectively, the patient was removed to bed. Reaction was slowly established, and she was several hours before she recovered from the effects of the ether. The pain, occasionally, very severe, was soon relieved by morphia administered hypodermically.

It is not necessary to record the daily progress of the case. The temperature only on two occasions exceeded 100° F., and the pulse averaged about 90 per minute. There was cystitis and incontinence of urine, so that, in spite of every precaution, a small bedsore formed over the sacrum on the tenth day, but as the patient was able to lie on her side, it gave but little trouble. She was well enough to sit up on the fourteenth day, although it was deemed advisable to delay doing so till the seventeenth.

The cyst weighed 2 lb. 17½ oz., and the fluid contents which during the operation had been evacuated measured 250 oz. It was multilocular, consisting of two large cysts, with a dense mass of smaller ones. The largest cyst contained a quantity of purulent fetid fluid, with flakes of lymph of a dirty yellow color; its wall was thin, injected, very lacerable, with several hæmorrhagic patches on its surface.—*The Lancet.*

MEDICINE.

On Professional Muscular Atrophy. By Dr. E. Onimus, Laureate of the Paris Academy of Sciences, member of the Paris Society of Biology, etc.

Activity of muscles determines the development and energy of muscular fibres, and the general law is that the more a muscle works the larger and the more powerful it gets. This law, however, has its limits, and I have just observed a certain number of cases in which the exaggerated work of certain muscular groups, far from producing hypertrophy, induces, on the contrary, a condition of considerable atrophy.

These cases are observed only in individuals who, through

the nature of their trade or work, are obliged to contract the same muscles constantly. Through excess of activity, irritations of the muscular fibres supervenes. Thus, in a man employed in a draper's establishment, and whose business was to replace the unfolded goods on their shelves, their supervened, little by little, a most remarkable atrophy of the deltoid muscles of both sides. And, indeed, it was these muscles which were constantly actively employed in performing this special work.

In a workman emyloyed in a tannery, who was every day for eleven hours at work, and always felt aching and fatigue after his day's labour, there likewise supervened marked muscular atrophy, confined to certain muscles. In order to prepare the skins, he was to perform with both arms a forward and baekward movement, which necessitated especially the action of the muscles of the shoulder, so that these were the first to be affected, and are at present almost completely atrophied. The wasting away is almost the same in both arms, as both were in action during the man's work, whereas, in respect to the legs, the right one alone was obliged to support the whole weight of the body. Consequently, with the lower limbs, the right leg is the only one that has wasted ; it is one-half smaller than the other, and the affected muscles are those the action of which was the most constant, such as the rectus femoris, vastus externus, and vastus internus.

In the beginning, the patients complain especially of prostration, of weakness even in the morning on getting out of bed. They feel—particularly at the outset of the disease—intense, darting, intermittent pains. Before atrophy is well-marked there always exists more or less temporary contraction of the muscles.

When wasting has once begun, it follows a most rapid course if the patient continues to fatigue his muscles.

Almost always this affection is mistaken for progressive muscular atrophy, but it difiers from it in its course and in a great many symptoms. 1st. The muscles which are the

first to be affected are generally the largest ones, and particularly those in the neighbourhood of the shoulder-joint. 2nd. The pain and cramps at the outset are also a distinctive sign. 3rd. These cases of wasting amend rather rapidly under the influence of rest and the use of constant and continuous electric currents.

Recently I observed one case which it was not difficult to differenitate from progresssive muscular atrophy, as the atrophied muscles were the same as those which are the first affected in this latter affection. They were the muscles of the thenar eminence, and chiefly the adductor pollicis. The patient was an enameller, who had to hold an object all day between his thumb and index-finger. He first got cramps in the thumb, which suggested the idea of scrivener's palsy, then tremor of the thumb, on account of the fibrillar contractions, and, lastly, atrophy. Under the influence of treatment there was a rapid amendment, which showed that the case was really one of professional muscular atrophy, and not commencing progressive muscular atrophy.—*The Lancet.*

On Gelseminum Sempervirens. By SYDNEY RINGER, M.D., Professor of Therapeutics at University College; and WM. MURRELL, L.R.C.P., M.R.C.S., Demonstrator of Physiology at University College.

This powerful drug has long been employed in America, and a few years ago was introduced into this country as a remedy for neuralgia by Dr. Wickham Legg. His statements have been amply verified by Dr. Sawyer, Dr. Mackey, Dr. Spencer Thompson, and others. It is said to be especially useful in non-inflammatory toothache and in neuralgia in the nerves supplying the teeth and the alveolar processes of the jaw. In large doses it produces general paralysis. Several cases of poisoning are recorded, some ending fatally.

We extract from the Proceedings of the American Pharmaceutical Association (vol. xxi., 1873) the following ac-

count of the effects resulting from a toxic dose:—"The symptoms by which its effects manifest themselves in the animal economy seem to indicate that its energy is primarily exerted on the cerebro-spinal centres, and secondarily on the respiratory apparatus and the heart, the functions of the former ceasing before those of the latter. The motor nerves of the eye are attacked first; objects cannot be fixed, dodging their position; the eyelids become paralysed, drop down, and cannot be raised voluntarily; the pupils largely dilate; there is a feeling of lightness in the tongue; it ascends gradually to the roof of the mouth; pronunciation becomes slurred; then the extremities refuse to support the body, and erect motion without support becomes impossible; the pulse gradually becomes more frequent, rises to 120 or 130 and more beats per minute, is small but regular; respiration then becomes laboured, the mind remaining clear, however. This state will set in about an hour and a half after the ingestion of an overdose of the drug. ..... All the symptoms will disappear after about two hours, leaving no unpleasant effect or derangement of the organism." In many cases of poisoning the patients have complained of double vision, and dimness, even loss of sight, and the breathing is slow and sometimes irregular and shallow.

In the *Practitioner* for October, 1870, Dr. Roberts Bartholow published an account of some experiments made on frogs, pigeons, and cats. He concludes that gelseminum (*a*) acts chiefly on the motor portion of the cord; (*b*) its paralysing effect is due to its action on the motor centre, and not to an action on the peripheral nerve fibres; (*c*) it acts also on the sensory portion of the cord, producing at last complete anæsthesia, but this effect in warm-blooded animals and in man is toxic only, and follows the paralysis of the motor functions.

As this drug is now attracting considerable attention in this country, and has been largely used in America for fevers, including ague and influenza, hemicrania, spermatorrhœa, dysmenorrhœa, &c., we were induced to make these

investigations, which will be seen in many respects to corroborate the conclusions of Dr. Roberts Bartholow. At first we used the liquid extract prepared in America, which contains some spirit, but afterwards the alkaloid dissolved in water, extracted by Mr. Gerrard, teacher of Pharmacy at University College.

We now proceed to give a short general account of the effects produced by the drug on a frog.

A medium-sized German frog was injected with the drug in the neighbourhood of the posterior lymph hearts. In this, as in all our experiments in which injections were given, special precautions were taken to ensure cleanliness of the apparatus, and freedom from contamination by other drugs. Soon after the administration of the drug the animal became extremely apathetic, and it was found that there was considerable impairment both of voluntary power and reflex action. When placed on its back the frog made no attempt to assume its normal position for a minute or two, and then slowly turned over, often, however, stopping halfway and lying motionless on its side. On touching the eyes they were closed, but some minutes elapsed before they were again opened, and even then the movement was performed with abnormal slowness. The loss of voluntary power and reflex action gradually increased, and the animal soon became perfectly motionless. When placed on its back no attempt was made to turn over. The whole body was limp and flaccid, and the limbs remained in any position in which they were placed, either flexed or extended. On pinching firmly any part of the body, a very feeble and ineffectual attempt to escape was made, the animal in its unavailing efforts, falling over on its back or sides. The application of the poles of the battery to the limbs excited, in addition to the muscular contraction, faint reflex movements. *Pari passu* with these changes in the nervous system, the breathing became hurried and superficial, and as the paralysis increased, the respiratory movements became more and more shallow, and, finally, with the total

abolition of voluntary power and reflex action, entirely ceased. The heart continued beating for a considerable time after the cessation of the respiratory movements.

The rapidity with which these symptoms presented themselves, and the ultimate termination of the cases, varied with the dose administered. Thus twelve minims of the liquid extract injected under the skin of a large frog produced such an impairment of voluntary power that in three minutes the animal was unable to turn over, and in two and a half hours death ensued. In doses of five minims or less, some hours usually elapsed before the establishment of complete paralysis, and the animals frequently remained alive, but perfectly helpless for many days. In one instance, in which a five-minim dose had been given, life was prolonged until the tenth day. Towards the close of this period there was considerable improvement both in voluntary power and reflex action; the effects of the drug appeared to be passing off, and hopes were at one time entertained of the ultimate recovery of the animal. A five minim dose of the 2 in 20 solution of the alkaloid gave rise to decided symptoms of poisoning in four minutes, and in five minutes later the full effects of the drug were exhibited.

With some frogs there occurred for a short time a peculiar mixed state. Thus, soon after voluntary and reflex power was completely abolished, on irritating one of the limbs, the hind extremities were sometimes shot out, and all their muscles, with those of the back contracted. This happened only occasionally. Thus, generally, on applying the electrodes to an extremity, only the muscle touched contracted, and none others; but sometimes there ensued the tetanoid condition just described; in a few minutes this ceased. With other frogs there occurred only a slight tremor of some of the muscles of the legs, chiefly those of the thigh. This tremor was at once excited by moving or jerking the body. It was apparently caused by the successive contraction of the muscles of the limb, giving rise to a peculiar flickering, which was readily perceived through

the skin. Supposing these phenomena to be due to the influence of the drug, they must be caused by its action on the spinal cord, for they occurred in the posterior extremities after ligature of the abdominal aorta.

Another circumstance also attracted our attention. When the electrodes are applied over the lower part of the spine of a live healthy frog, the hind legs are shot out much in the manner before described. Now it appeared to us that after poisoning by gelseminum the posterior extremities were more forcibly extended, and remained so for a longer time.

We then performed the following experiments to ascertain whether gelseminum paralyses by its effect on the brain, the cord, the motor or sensory nerves, or the muscles.

The paralysis of reflex and voluntary power is certainly not due to the action of the drug on the muscles; for after poisoning, on galvanic stimulation the muscles contracted as energetically as those of an unpoisoned animal; moreover, on several occasions we tied the abdominal aorta or the femoral artery and vein, and twice we severed the thigh, leaving the leg attached to the trunk only by the nerve, and then poisoned the animal, and we found that the muscles subjected to the action of the gelseminum contracted as energetically and retained their contractility as long as the muscles protected from the poison by ligature or section of the vessels.

Neither is the paralysis due to the action of gelseminum on the motor nerves. This, indeed, is proved by the experiments just mentioned, which we now proceed to describe more fully. We tied the femoral vessels on several occasions, and twice we cut through all the structures of the thigh, except the nerve, which alone connected the severed leg with the trunk, and then poisoned the animal by injecting the drug under the skin of the back, in the neighbourhood of the lymph sacs. The paralysis occurred as soon, progressed as rapidly, and became as complete in the limb protected by ligature or section from the action of the

poisoned blood as in other parts subjected to the influence of the poison. After complete paralysis we found that the nerves unprotected from the action of the poison conducted as freely as those protected by ligature or section. These experiments show that the poison does not act by its effects on the ends of the motor nerves; but the trunks of the nerves in the abdomen, and above the ligature in the thigh might be affected, and the paralysis produced in this way. We therefore on three occasions ligatured the abdominal aorta, just above its bifurcation, and then poisoned the animal in the manner described, and we found the paralysis progressed in the hind protected limbs as in the anterior, and as in the case of frogs whose hind limbs are unprotetced by ligature of the aorta.

There remain, then, to consider the brain, cord, and the afferent nerves. We shall treat of the loss of reflex power separately from that of voluntary power. It is obvious that the destruction of reflex power cannot be due to the effect of the poison on the brain, and as it is not due to the paralysis of the motor nerves or muscles, it must depend on paralysis either of the afferent nerves or the cord. It is not due to the paralysis of the afferent nerves, for after tying the abdominal aorta before administering the poison, and thus protecting the hind extremities from its effects, we could not excite reflex action by galvanic stimulation of the hind legs. It therefore appears that gelseminum abolishes reflex action by its effect on the cord.

Does it thus affect the reflex function by its direct action on the cord, or indirectly by stimulating the inhibitory centre for reflex movements? It does not act through Setschenow's inhibitory centre; for, firstly, the abolition of reflex function is too complete to be produced in this way, and, secondly, after producing complete loss of reflex action, we beheaded the frog, and so divided the cord below the inhibitory centre, which is situated in the neighbourhood of the optic lobes, and yet the loss of reflex power remained as complete as before. We therefore conclude *that gelsemi-*

num destroys reflex power by its direct action on the spinal cord.

We have next to explain how the loss of voluntary power is produced. We have shown that the paralysis is not due to the effect of the drug on the muscles and motor nerves, and it is obvious that the loss of voluntary power cannot be produced by paralysis of the sensory nerves. It must therefore be due to the action of the gelseminum either on the brain or the motor tract of the spinal cord. We have no experiments to decide this question, but we offer the following reasons in favour of the view that it acts through its influence on the cord :—(*a*) The loss of voluntary and reflex power proceed *pari passu*. (*b*) The abolition of reflex power being due to the effect on the cord renders it to some extent probable that the loss of voluntary power also depends on affection of the cord. (*c*) In the case of accidental poisoning where the voluntary power was so complete that the patients could not move a muscle could not even raise the eyelids, it is recorded that on recovery they asserted that their consciousness was not at all affected. It may be said that if the loss of voluntary power is due to paralysis of the motor tract of the spinal cord, it should not conduct electric impressions But we may remark that a great difference of opinion exists among physiologists respecting the conducting power of the cord of electric irritation, and it appeared to us therefore unnecessary to perform this experiment.

We have seen that the afferent reflex nerves are paralysed. Are the sensory nerves affected? If the sensory nerves are also the afferent reflex nerves (the view generally held by physiologists), the question of course is answered in the negative. Still we suppose that though some afferent nerves may have this double function, yet there are others which are simply sensory. Are these paralysed, or are the sensory perceptive centres paralysed? In other words, does gelseminum destroy sensation as some writers have supposed, and if so, does it act on the sensory nerves or the

sensory tracts of the cord, or on the sensory perceptive centre? These experiments do not enable us to answer these questions, but we may state that as long as voluntary movement remained, the frog seemed to feel pinching and galvanic stimulation, for on the application of either kind of irritation, the animal made voluntary efforts to escape, though after paralysis was marked it required considerable pinching to induce voluntary movement. Was this due to defective feeling or from the paralysis requiring a greater effort to cause movement? We shall return to the effect of gelseminum on sensation, when we treat of its effects on man.

The foregoing experiments prove that gelseminum abolishes reflex, and probably voluntary, movement by its influence on the spinal cord. It may, however, in addition, to a slighter extent, and late in the poisoning, affect the motor nerves. This is the case with Calabar bean, which paralyses the spinal cord, but also slightly the motor nerves. To learn whether gelseminum in any way depresses the motor nerves, we performed the following experiments on three frogs. We tied the iliac artery, and then poisoned the animal; and, after the loss of reflex and voluntary power, we tested at frequent intervals the conductivity of the sciatic nerves to electric stimulation, and we found that the gradual loss of the power of conduction was equal in the two nerves, but that after some time the nerve protected from the action of the poison required a rather stronger current than the unprotected nerve, due, perhaps, to diminished nutrition from arrest of the circulation. Hence we conclude that probably (for our experiments are not numerous enough to settle absolutely this question) gelseminum exerts no influence on the motor nerves.

We may here state that in each experiment in which an artery was tied we ascertained by a post-mortem examination that the operation had been successively performed. —*The Lancet.*

On the Duration of the Quarantine required after Puerperal Fever. By J. Braxton Hicks, M.D., F.R.S., Obstetric Physician to Guy's Hospital.

It has been asked in the *British Medical Journal*, and I have also been frequently and earnestly urged in the same direction, that an opinion should be authoritatively pronounced, for a guide to the profession generally, as to the length of time an accoucheur should abstain from midwifery practice after attending a case of puerperal fever. It has come to my knowledge, from several sources, that somehow the public have acquired an idea that it requires *three months'* purification before a medical man is fit again to attend confinements. From whence this idea has originated I am at a loss to understand; no statement of the kind can have originated from the profession. Indeed it is self-evident that midwifery practice wouid not be possible on such a basis. If we suppose the same rule to exist after all cases of zymosis, the impossibility of practice is clear. It is possible, indeed I think it highly probable, that assisted, by the manipulation of midwifery, contagia would continue for a longer time influential than is usually observed in the attendance on the ordinary zymotic diseases. Yet the difference cannot by any means be so great as is indicated by fixing the time at three months.

It does seem to me, therefore, very desirable to have some kind of rule as to the time, which on the one hand, would secure our patients from risk; and, on the other, would serve as a protection to our profession from the extravagant demands of the unlearned. And, indeed, there is another point very important to the public, namely this: that if the quarantine extends beyond a practicable time, women will find a difficulty, and, perhaps, an impossibility, in obtaining aid in their hour of trial. I am not now alluding to the time required in those rare cases where puerperal fever haunts a practitioner for months; these though well authenticated, are very rare; our rules for every day life are not based on exceptions, but on ordinary conditions.

The speakers in the recent debate at the Obstetrical Society, while admitting that there should be an interval, have not fixed its duration ; except the President in his late address to the Society, when he expressed his opinion that a week should elapse after the last day of attendance on a single case ; but, in the event of a series, then a month.

The readers of the *Journal* could, therefore, render no more valuable service than by communicating in its columns facts bearing upon this very practical question. For myself, I have always held three weeks' abstinence and purification to be the best approximation to the requirements of the case, giving ample time, probably more than actually necessary, to discharge the poison from the system and clothes. I am indebted for this belief to my teacher and predecessor in the chair of midwifery at Guy's, the late Dr. Lever. The soundness of this advice has been borne out by long experience over very large fields of observation ; for I am not aware that it has been found to fail to cut off the spread of the disease, if we except those rare instances above alluded to, which probably have their origin in some conditions to which the medical man is exposed unknowingly in his house, etc. Three weeks may be thought too much by some ; but if a rule is to be laid down, it must cover all reasonable contingencies ; for when we bear in mind that in an attendance on a case lasting, say a week, with frequent and prolonged visits, manipulations, washing out of uterus, the hands and clothes become saturated with the contagium, we could scarcely expect to evolve this wholly in less than twelve or fourteen days ; and, therefore, an extra week does but give a complete security in the matter. There is also another view ; the extra week of obligatory rest from heavy midwifery practice is beneficial to the medical man, harassed and depressed as he would be after continuous attendance on these distressing cases. Of course, the state of the weather makes much difference as to the time during which contagium lingers on the clothes. No doubt a brisk walk in a gale,

with a thorough drying of the clothes before a fire, coupled with a brushing afterward, will, if the visit be short, probably go far to remove the poison; yet it would be unwise, as a rule for every case, to act on this view. Taking everything into account, I would give it as my opinion that, if three weeks' abstinence be adopted as a rule after the last day of attendance, the medical man should be held to have adopted all reasonable precautions, and not to be guilty of culpable carelessness.—*British Medical Journal.*

A New Method of Dilating the Eustachian Tube and Ventilating the Cavity of the Tympanum.

Prof. Gruber, of Vienna, has recently made public a new means of obtaining the good effects of catheterization of the Eustachian tube without incurring any of the difficulties or dangers of that operation. Prof. Politzer has, as is well known, devised a method having the same object in view. The patient holds some water in his mouth; he introduces into the nose the end-piece of a kind of syringe made for the purpose, and holds it in the nostril air-tight with one hand. He then swallows the water, and at the command of the surgeon injects the air in the syringe into the nasal cavity and onwards. Air can by this means be driven into the Eustachian tube. Lucœ proposed to effect the same result by replacing the swallowing of water in Politzer's experiment by directing the patient to pronounce the vowel *a* (as in *f*ather) and then injecting air. Prof. Gruber finds that pressure of the root of the tongue against the most posterior part of the palate during a strong expiration presses the soft palate upwards and backwards and thus completely closes the fauces, and thus the exit of air through the nose and mouth is entirely prevented. This requires, however, in some persons a little more care than in others, and consequently, instead of a simple expiration, it is often desirable to make the patient try to

pronounce, during vigorous expiration, the sound *kck* or *hck*, introducing between the consonants various vowels, as *hack, heck, hick, hock, huck*, &c., until the sound is got which most effectually produces closure. During this manœuvre air enters the tube, and the tympanum will often be felt affected, as in Valsalva's experiment. Prof. G. utilises these facts as follows:—The surgeon places himself before the patient, introduces into his nose the end of the nose-piece of the syringe, and closes the nostrils over it hermetically with two fingers. At the word of command the patient pronounces one of the syllables (*hick*, &c.,) as above, and at the same moment the surgeon injects air. It is preceived at once to enter the tube with a distinct sound, which can be ausculated by the otoscope, and in cases of perforation, produces the usual sound. These and all other signs of the entrance of air into the tube are present, and prove the success of the operation. If the head be bent well to one side during the operation, the upper ear is almost always the one into which the air enters, and it does so more easily than when the head is erect.—*Vide Allgem. Wien. Med. Zeit.*, Nos. 42, 51.—*The Doctor.*

Bacteria and Septicæmia.

In an elaborate experimental paper *(New York Medical Record)*. Dr. T. E. Satterthwaite arrives at the following conclusions:

1. Bacteria are certain vegetable organisms which belong probably to the algæ; they are found abundantly in nature, but chiefly where there is moisture.

2. They exist in the body in health, covering the mucous membranes from the mouth to the anus, and sometimes appear to penetrate a certain distance into the system, without causing symptoms of disease.

3. They also exist in putrefying fluids, and in various disease-processes, occurring in hot and cold abscesses, in the blebs of erysipelas, and in simple blisters.

4. It is doubtful whether the virulent principle of infective diseases is albuminous.

5. This principle does not reside in the perfectly clear fluid that passes through porous clay. In putrid infectious fluids this appears to be certain. The poison is rendered less virulent by repeated filtrations through common filter-paper.

6. The virulent principle may be boiled for hours, filtered numbers of times in the ordinary way, boiled with alcohol, and again filtered and dried, and yet the watery extract of such a dry residue will produce septic symptoms. It is therefore soluble, or at least suspended in water.

7. The liquid which is thus poisonous may be clear to the eye, but contains granules under the microscope.

8. These granules have not produced bacteria in a number of instances when they were placed in a suitable condition to do so.

9. We cannot, therefore, feel that satisfactory evidence has been brought to show that, in any of the diseases or processes enumerated, minute organisms are the sole and sufficient causes of disease.—*Medical Times, Phila.*

The Temperature of Drunkards.

The *Deutsche Arch. f. Kin., Med.*, vol. lx., p. 12 contains a very important paper by Reincke, of Hamburg, on this subject. In his recent Cantor Lectures on alcohol, Dr. B. W. Richardson referred to the power of diagnosing dead-drunkenness from other causes of coma by the fact that the temperature of drunkards is diminished. Reincke has found that the internal temperature of drunkards exposed to cold may fall to an extent hardly conceivable. The rectal temperature will commonly fall to 95 deg. F. or 93 deg. F.; it may descend to 82 deg. F., or even as low as 75·2 deg. F. The subject on whom the last was observed recovered and regained his normal temperature after 23 hours.—*The Doctor.*

Local Origin of Cancer.

Virchow's *Archives*, No. lxiv., contains an article by Fredun, of Breslau, on the "Primitive Seat and Mode of Extension of Pelvic Carcinoma in Women." He relates several cases of pelvic carcinoma occurring in virgins or women with atresia vaginæ. In these cases the cervix uteri, which is the commonest seat of the disease, escapes, or is only secondarily affected, there being an absence of all sources of irritation. It is around the rectum or bladder, or in the connective tissue of the cavity of the pelvis that the disease originates in these cases. The author admits the insufficiency of his materials, but his opinion is carefully stated.—*The Doctor.*

The Diagnosis of Cerebro-spinal Meningitis.

In a recent clinic Dr .Richards remarked that, while pain in the head, vomiting, epileptiform attacks, disease of the optic discs, emaciation, eruptions, involuntary micturition, were symptoms found in many head-affections, the sudden onset of symptoms, pain in the back of the neck, the stiffness of the muscles of the neck, and retraction of the head, were sufficient to separate cerebro spinal meningitis from hydrocephalus acutus, basilar meningitis, and tumor of the brain, diseases to which, in its symptoms, it was nearly allied.—[*Phil. Med. & Surg. Reporter.*

Jervia—A New Alkaloid in Veratrum Viride.

In the *Amer. Jour. of Pharmacy* for Oct., 1875, Charles Bullock describes the alkaloid *jervia*, known for a number of years as existing in the root of veratrum album, but now found by him in the American species, *viride*. Its physiological properties are described by Prof. H. C. Wood, Jr., as producing general weakness, without vomiting or purging, lowering arterial pressure and slowing of the pulse, profuse salivation, and finally convulsions. The character of the convulsions is very peculiar and very constant.

CANADA

Medical and Surgical Journal.

MONTREAL, FEBRUARY, 1876.

CITY SMALL POX HOSPITALS.

We have received the following circular from Alderman McCord, Chairman of the Health Committee, and are happy to be able to announce to our readers that at long last we are, in this good city, provided with two Small Pox Hospitals, both under civic control. One under the management of the Ladies of the Providence Nunnery, intended for Roman Catholic patients; the other under the charge of a lady of experience, we presume a Protestant, and exclusively intended for the Protestant community. Both hospitals are under the professional care of Dr. La Rocque. This, if we might make a suggestion, could be slightly improved upon.

Our French-Canadian fellow citizens have forced upon the city the establishment of two separate and distinct hospitals. We were opposed to sectarian or national distinctions of any kind, and should have gladly seen but one institution, but since we have two we are quite satisfied, and shall second the efforts of the Health Committee in their laudable attempts at isolation. But with regard to the professional services alone of Dr. Larocque, why, might we ask, is the Protestant Small Pox Hospital not under the professional care of Dr. Dugdale? That gentlemen was, we believe, selected as Health Officer by the City Council, to represent the English speaking part of the community. If, then, he occupies the very important post of Health

Officer to the Protestant side of the city, why does he not assume the charge of the Protestant Small Pox Hospital?

The French-Canadians have their own selection in Dr. La Rocque. The British Canadians will, we feel certain, expect to be treated by a professional man of their own nationality. We regret to make these allusions; still, we think it a duty. We have understood that Dr. Dugdale does not desire to attend the City Small Pox Hospital. If so, there are many others who would gladly do so; and we do believe it would conduce to a feeling of greater confidence in the success of both institutions, if they were under separate and distinct professional charge. We do not consider it necessary that the Health officers should attend the Small-pox Hospitals, as it is a separate and distinct service for which those gentlemen should receive a separate and distinct gratuity. But since the city, at considerable outlay, have established a Roman Catholic and a Protestant Hospital, separate and distinct as to internal management, let the theory be carried out to the full, and give us a French Canadian Catholic Physician and a British Canadian Protestant Doctor!!!

We subjoin Mr. McCord's circular.

CITY HALL.

1st February, 1876.

MY DEAR SIR,

As you are aware, the City has provided accommodation in the Civic Hospitals for its citizens suffering from small-pox. The Roman Catholic patients are received in the new building on the Hall property, attended by the Ladies of the Providence, and the Protestant patients, in the stone house on the same property, in charge of a lady of experience, assisted by a competent staff; and both hospitals are attended by Dr. Larocque, one of the Medical Health Officers, and every care and attention paid to the comfort of the patients. These hospitals are very favorably situated with a view to the recovery of the patients and, in the new building especially, the wards are very large and well ventilated. It is very desirable that citizens suffering from small pox should avail themselves of the advantages thus placed at their disposal by the City and by going to hospital and thereby isolating themselves, limit, as far as possible, the chance of communicating the disease to others. We have scarcely a doubt that patients are daily recovering in the Civic Hospitals, who should have succumed to small pox, had they remained

in their crowded homes. Accommodation is also provided for a limited number of pay patients in private wards, who may be visited by their own Medical Attendants or by the Health Officer at their option. For terms in private wards, kindly communicate with Dr. Dugdale, No. 645 Lagauchetiere Street. You are earnestly requested to advise your patients who may contract small pox to go into the Civic Hospitals in cases where isolation cannot be obtained in their residences, or when in your judgment it be desirable to do so. The Health Committee, in its endeavours to diminish small pox in the City, desire the kind co-operation of the medical profession, as it is conscious that any success achieved will be very largely due to such co-operation.

You are, of course, aware that the Hotel-Dieu and the Montreal General Hospital have been obliged to decline small pox patients.

I am, dear Sir,

Your obedient servant,

DAVID R. McCORD,
Chairman of Health Committee.

PRESENTATION

Of a Service of Plate to Charles O'Reilly, Esq., M.D., on the occasion of his retirement from the office of Resident Physician, City Hospital, Hamilton, Ont :—

Last evening His Worship Mayor Roach enrertained the members of the Corporation this year, and those who had seats at the Board during 1875, together with the city offieials and a few other invited guests, at dinner at the Royal Hotel, on the occasion of a presentation by the Aldermen of the city to Charles O'Reilly, Esq., M.D.

After the customary loyal toasts had been given,

The Mayor said that he had a most pleasing duty to perform. One of the objects of our gathering together this evening is to do honor to one of our rising professional young men, who has been our Resident Physician of the Hospltal for nearly nine years, during which time he had gained the respect and esteem of all with whom he has come in contact—who by his energy and ability has obtained the management of one of the largest hospitals in the Dominion.

Dr. O'Reilly: We congratulate you on the appointment for many reasons, for I believe you stand higher in the estimation of our citizens than you have ever done. To-night we have met to give you this presentation to testify the high respect and esteem we entertain for you. I regard it a privilege to be entrusted by the subscribers with the discharge of a duty of such an agreeable character. In handing it to you I can assure you it is offered by us as a tribute of our high regard and admiration, and I am sure I am only

echoing the sentiments, the sympathy and the desire, and uttering the words of all present, when I say I hope God may prosper and bless you.

He then read the following address :

To Charles O'Reilly, Esq., M.D., late Resident Physician to the Hamilton City Hospital, and Medical Officer to the Board of Health.

DEAR SIR: We feel that we ought not to allow the occasion of your retiring from your official position as Resident Physician of the City Hospital and Medical Officer of the Board of Health, to pass without expressing both our regret in parting with you, and our entire satisfaction with the manner in which you have discharged the duties of your offices. Under your management as Resident Physician, during the past nine years, our Hospital has acquired more than a local reputation as a model institution, and your attention and courteous demeanor to all who have been brought in contact with you, either officially or otherwise, has gained many ardent and admiring friends; we beg you will accept, as a token of our kindly feelings towards you, and of our appreciation of your past valuable services to the city, the accompanying Service of Plate, and in saying "Good-bye," we assure you that you have our warmest wishes for your success in the new sphere of duties upon which you are about to enter.

Signed on behalf of the Corporation,

GEO. ROACH,
Mayor.

(The present consisted of eight pieces of silver service, onsisting of salver, urn, coffee pot, tea pot, sugar bowl, butter cooler, slop bowl and cream jug, all of the latest pattern and most beautiful design. They were procured at Crystal Hall, Hamilton, from Mr. Thomas Egan, and reflect the greatest credit upon both dealer and manufacturer.)

The health of Dr. O'Reilly was then proposed, received with three times three, and enthusiastically drunk.

REPLY.

DR. O'REILLY replied as follows ;

MR. MAYOR AND GENTLEMEN,—Allow me to assure you I had no anticipation that, on my departure from Hamilton for another sphere of professional labor, you intended to pay me so high a compliment as you have done this evening by the presentation of the beautiful and costly testimonial of your regard and esteem as that before me now, and of your appreciation of my services in connection with the Hamilton City Hospital Nearly nine years ago, when comparatively a mere boy, just fresh from McGill College, you confided to my care the responsible position of Resident Physician of the Hamilton City Hospital. During that period it was my sole aim and study to discharge my official duties for the best interests of the city, to meet the approval of the

City Conncil and for the relief of the suffering and afflicted committed to my care. I am proud to know in retiring from the City Hospital, that it has been so well and efficiently managed as to merit and reeeive the hearty commendation of all those competent to form a correct judgment on the subject, both here and elsewhere; but at the same time I must remark that little credit conld be laid at my door, had I not been constantly aided and assisted in every possible way by the untiring energy and judicious advice of the Chairman of the Hospital Committee, Mr. Fitzpatrick, and the harmonious co operation of the various Hospital Committees that have had charge of the institution during my incumbency. I am happy to state as a pleasing coincidence, that Mr. Fitzpatrick entered upon his duties as Chairman of the Committee in the same year that I myself became resident physician: but I regret to say that he, too, retires from the position he has so long and honorobly held at the same time as myself, though I have no doubt that his successor, Dr. Crooker, will prove a most efficient officer. Personally, gentlemen, I feel confident of your friendship and your good wishes for my success, and officially, I am sure a greater compliment could not have been paid me than that of which you have made me the honored recipient this evening. I expected to leave Hamiltou quietly, but this you have now effectually prevented by your great kindness and liberality on this occasion. I can assure you it is a hard task to leave my native city, and to say good-bye to those whose friendship has stood the test of so many years, but whose kindly and heart-felt wishes will go with me I am sure, to my new home. Mr. Mayor, and Gentlemen, in leaving Hamilton I required no such substantial proof to make me think of the past and of the many happy years passed among you and in your employ, but I can assure you that I shall always feel proud to look upon this magnificent and splendid *souvenir*, which you in your generosity and kindness, have presented me with this evening, and through all my coming years I shall look back upon this as one of the *red letter days of my life*. Mr. Mayor and gentlemen, I again repeat, and I trust you will all accept, my most heartfelt thanks for the honor you have conferred upon me this evening.

The doctor was cheered on taking his seat.

We believe that Dr. O'Reilly has received the appointment of Resident Physician to the Toronto General Hospital; and, from what we know of the Doctor, we believe that he will be a thoroughly efficient officer. We wish him every success in his new sphere of duty.

THE LATE GEORGE GREEN GASCOYEN, F.R.C.S., ENGLAND.

It is with a feeling of deep regret that we record the death of George Green Gascoyen, one of the Surgeon's to St. Mary's and the Lock Hospitals, London. Our per-

sonal acquaintance with him was slight, yet we were impressed with his earnest and fervent manner, with his sincerity, thoughtfulness, and lack of selfishness.

We first met in the summer of 1872, when Mr. Gascoyen visited this country, seeking health in recreation and temporary relief rom the arduous duties of a London hospital surgeon. His stay in this country was very short, and we saw less of him than we should have desired, as he was a most interesting companion. Two years ago we met again in London, and we regretted to see a marked change in his appearance; he looked fagged and weary and markedly thinner, and was on the eve of a trip to the Continent.

In parting he intimated his intention of visiting Canada in a year or two, and expressed a hope of our again meeting. He was recently elected an Examiner in Anatomy at the Royal College of Surgeons of England, and we learn from an exchange that, although in ill health, he attended two meetings of the Examining Board the week prior to his death, so that he may be said to have died in harness. The immediate cause of his death was pleuro-pneumonia; he died on Sunday, the 23rd January ultimo, at his residence Queen Ann Street, Cavendish Square, at the age of 46 years.

We observe it is stated in the *Medical Times* that "with him, unfortunately, dies a vast accumulation of knowledge, especially relating to syphilis, the result of many years labours in the Lock Hospital."

Nitrate of Soda in Dysentry.

Several German physicians extol the use of nitrate of soda in dysentery. When the small intestine is involved, 60 to 100 grains are given in 24 hours. When the disease is confined to the colon and rectum, the quantity given during the day is much greater—from three to six drachms. It is given in an oily emulsion, and warm.—*Pacific Medical and Surgical Journal.*

CANADA

MEDICAL & SURGICAL JOURNAL.

ORIGINAL COMMUNICATIONS.

Remarks on various Operations for Cataract, with statistics of 510 Cases. By FRANK BULLER, M.D., M.R.C.S., England; late Resident Surgeon to the Royal London Ophthalmic Hospital.

(Read before the Medico-Chirurgical Society, Montreal.)

It is not my intention to weary you with labored descriptions of the many operations which have from time to time been proposed and performed for the removal of cataract, each of which has in turn found ardent admirers and zealous advocates, strong in their belief, that the nearest possible approach to perfection had at last been attained, and each of which has, in the opinion of its upholders, presented advantages—some real and some imaginary,—not to be claimed for any preceding method. Some of these operations have been born in obscurity and died in their infancy; others of more robust parentage have lived longer, and flourished for a time, but have likewise passed away, whilst others, again, endowed with still greater vitality retain all the freshness of youth and seem to be in a fair way to survive as long as the science, which brought them into existence.

These last are, in a practical point of view, most worthy of consideration, and since the question as to their relative merits cannot yet be considered settled, it is fair to assume that fresh facts bearing upon this question will not be unacceptable to those who interest themselves in ophthalmic surgery. I therefore venture to place before you, in as condensed a form as possible, the results obtained in all the

operations done for uncomplicated senile cataract in the Royal London Ophthalmic Hospital during the last three years. The diagram is intended to show the three methods of extraction chiefly in vogue at the present time. The dotted line No. 1 is, as you will perceive, intended to represent the line of incision for the linear extraction of Von Gräfe. It differs very much from No. 2, in which the dotted line represents what may be called the oblique corneal, or median flap operation, the puncture and counter-puncture being made at or a short distance behind the sclero-corneal junction, in the horizontal meridian, and without iridectomy. The same knife may be used for its performance as in the Von Gräfe operation, its blade forming an angle with the plane of the iris, of about 45°, until the section is completed.

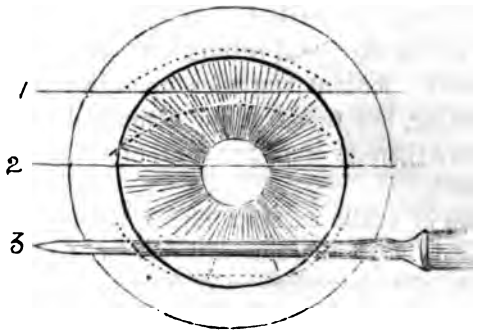
No. 3, which I shall call the sclero-corneal operation, is the modification of Von Gräfe's incision, now adopted by many eminent ophthalmic surgeons. The puncture and counter puncture are made nearer the corneal margin, the corneal flap is larger than the latter, and the top of the incision is usually made entirely within the cornea, consequently no conjunctival flap is formed.

Of course there is no absolutely fixed point for commencing the incision in any one of these operations, and hence certain variations will occur, partly accidental and partly intentional. The linear extraction of Von Gräfe, slightly modified, is I believe still practised by most German ophthalmologists, as well as by many others both in Europe and America.

The oblique corneal method, done either upwards or downwards, but without iridectomy, has not nearly so many supporters, though, for reasons I shall presently mention, it is likely to remain in favor with a certain number of operators. Lastly, the sclero-corneal operation seems to have found more favour in England than elsewhere, and it is more frequently performed at the Royal London Ophthalmic, than any other operation; though, it must be admitted, with such an amount of variation at the hands of different

surgeons, that it was often difficult to decide whether in some instances the most appropriate designation would not have been "flap operation with iridectomy;" or in others, whether it should not be named "linear of Von Grâfe." But since the sclero-corneal junction was always to a greater or less extent involved in the incision, which however was never made so far back as in the scleral or linear extraction of Von Gräfe, or so far forward as in the old flap operation, I have determined to adopt the name sclero-corneal for all the operations done at Moorfields, which do not belong distinctly to one of the other classes mentioned.

Under this head then the larger number will be classed. There is a much smaller number of the oblique corneal



section, still less of the flap extraction, and in addition to these are a few in which the incision was made with a keratome, and the lens removed by a scoop. These last, only twelve in all, retain the old name of "scoop extractions," and form accordingly a class by themselves.

Before proceeding any further a few words as to why certain operations for the removal of cataract have fallen into disuse may not be out of place, inasmuch as they may help us to form clearer ideas in regard to the causes of failure or partial failure, which still too often attends each of the three operations now most frequently practised; for it is only by clearly recognizing these causes that we can

ever hope to render success a certainty, or that we can determine in any given case exactly how to proceed in order to give the patient the best possible chance of regaining vision. To begin with reclination or couching, it is inconceivable that an operation apparently so simple and easy, should have been abandoned by general consent, unless very strong objections were to be urged against it, and such we find to be the case. The principal objections are as follows:—The lens was apt to become broken and remain in part at least behind the pupil. It often ascended again and rendered the operation futile. Frequently violent inflammation followed the operation almost immediately and destroyed the eye. If everything went well for a time the dislocated lens was practically a foreign body within the eye, and as such, always liable to set up destructive changes, so that good results were often found not to be permanent. Recent statistics upon this subject are of course wanting, but those at our command seem to show that not more than 40 or 50 per cent. of satisfactory results were obtained.

Discission of senile cataract either through the cornea or sclerotic is even more unsatisfactory, for in order to effect a cure the operation must be repeated very many times, always with a risk of setting up iritis or traumatic glaucoma. I have seen one case, a man aged 58, who had had both his lenses needled thirteen times in four years and still they were not half absorbed. At this rate most persons afflicted with senile cataract would scarcely regain vision on this side of the grave.

The linear extraction invented by Gibson in 1811, soon fell into disuse, but was revived again for a short time in 1851. It was found, however, to be only adapted to soft cataracts, as any attempt to extract a hard lens through so small an opening, implied a degree of violence which even the best disposed eye could not fail to resent, nor was this all, for after the repeated introduction of traction instruments, insult was added to injury by the fragments of lens which

they had failed to remove still remaining in the eye, sure premonitors of future trouble. The operation known as "Flap extraction," is one which commands respect both for the successes it has to record and on account of its long and undivided reign. For more than a hundred years it was almost the only extraction performed. As far back as 1752 it is stated that out of 206 flap extractions 182 proved successful, and in 1873 Arlt of Vienna, after a very large experience extending over thirteen years and numbering 954 operations, claims to have obtained 79 per cent. of success, and only to have failed in 7.86 per cent. of his cases. But he records 1075 extractions by the modified linear method, in which he has obtained a still higher percentage of success and a lower one of failure, viz.: 83.72 per cent. and 5.67 per cent. respectively. He has, therefore, like most other ophthalmic surgeons, almost entirely abandoned the flap extraction in favor of the latter, believing that it offers on the whole decidedly better chances of restoring useful vision.

In England it was not until the introduction of chloroform into ophthalmic practice that men began to feel the urgent need of some other method of extraction, and they fondly hoped when the "scoop operation" was introduced that the great desideratum had been attained. For a time its results seemed to justify their enthusiasm.

The charges against the flap operation were (and they still hold good) as follows: The cornea lost, to a great extent, its proper source of nutrition, and was apt to necrose. The size of the flap tended to prevent perfect coaptation of the cut surfaces, which were also liable to be kept asunder by foreign substances. Prolapse of iris was likely to occur either during or after the operation. The iris was often much injured by the passage of a large hard lens through a narrow pupil, thus giving rise to traumatic iritis; and lastly vitreous humor often escaped, more particularly was this found to be the case when chloroform had been used and happened to have caused coughing or vomiting. Thus we

see the indictment against the flap operation is a heavy one. Not less serious are the charges against its immediate successor the "Scoop operation," for here we have the introduction of three instruments within the eye, besides the one necessary for making the incision. The iridectomy, however harmless initself, had a different significance when associated with the stretching and bruising of the iris, which occurred during the extraction of the lens. Portions of cortical substance generally became detached from the main body of the lens by the pressure of the scoop and were difficult to remove. So that in this operation fragments of lens frequently remained in the eye, and added to the misfortunes of the already sorely tried iris, nor was the latter slow in responding. Accordingly we find that a large proportion of these cases suffered from iritis, often of a severe type, and of the cases which apparently made a good recovery, very many required subsequent attention on account of thickened capsule in the pupil. Rupture of hyaloid membrane, caused by the introduction of the scoop, and consequent loss of vitreous was not an uncommon occurrence. In so far as this operation permitted the use of chloroform, or even rendered the administration of an anæsthetic almost indispensable, it may be regarded as a triumph over the one previously considered, but the drawbacks just enumerated soon cast a shade over the joyous hopes of its converts, one after another of whom were forced to acknowledge themselves disappointed in their expectations, for the test of experience, the only true guide in such matters, revealed the stubborn fact that disaster still too often attended their best directed efforts.

A few years sufficed to decide the fate of the scoop operation, and now it is to be placed in the category of those things which we often hear of but seldom see.

The method of Von Gräfe now succeeded the scoop operation and was soon almost universally adopted; but many operators found themselves in a new dilemma occasioned by the extremely peripheral position of the incision, as

performed by the distinguished Berlin Professor. This led to slight modifications by one or other of his imitators, and as an outgrowth of these, we have to-day the two methods of extraction indicated by the figures 2 and 3 in the diagram, neither of which can, however, as already stated, be looked upon as fixed and unalterable procedures, but may be varied in detail according to the exigencies of the case or the whim of the operator.

The statistics I propose to lay before you are mainly in reference to these two methods of performing the operation, due allowance must, of course, be made for the fact that these operations were not all the work of one man, but of several, and that no two of them perform the same operation exactly alike. I must own, to my sorrow, that in going over the record of the cases I have discovered many deficiencies, and am consequently unable to elucidate several of the points which cataract statistics, properly worked up, ought to shed light upon. There are, however, insuperable difficulties in the way of arriving at an exact knowledge of final results in hospital ophthalmic practice, and this must in part excuse the imperfections of any report which includes all the cases treated during a long period of time, if, as in the present instance, the number is very considerable.

Most of the cataract statistics hitherto published have emanated from private individuals or institutions superintended by the person who makes the report as well as performs the operations, hence they are open to the suspicion that everything has been done to bring out the work of the individual in the most favorable light possible, and for this reason many people profess to hold such statistics in very little esteem. No such reproach will apply in the present instance, for I claim to stand on neutral ground without bias of any sort, and without the slightest motive or inclination to represent facts in other than their true light.

The number of extractions which have come under my care whilst connected with the Royal London Ophthalmic Hospital is in all 579; of these 69 were complicated in

various ways and must be excluded from the statistics, leaving 510 cases of uncomplicated senile cataract; 416 were operated upon by the sclero-corneal method.

Of these 416 I find 323 are stated to have recovered without any serious drawback, (slight degrees of Iritis being left out of consideration) although at the date of discharge many of them could see but very imperfectly either on account of lens substance obstructing the pupil or from disturbance in the refractive condition of the cornea, the latter being either one of acquired astigmatism, or loss of normal transparency, which again may have been due to injury inflicted by the operation, or, possibly, to the prolonged use of bandages after the operation; or, what is more likely a combination of these circumstances very frequently exists, and this is the chief reason why the vision test after cataract operation is not of much value, unless it could always be made at a time when the ultimate result may be regarded as established, say six months or a year after the operation. The impossibility of carrying out such a scheme in case of hospital patients coming from a distance is self-evident.

I have noted the vision obtained whenever it could be done, but without going into the details of each case, no safe conclusion can be drawn from the figures thus obtained, inasmuch as vision was sometimes tested just before the patient's discharge from the hospital, sometimes after an interval of several months had elapsed, the patient having returned to procure glasses, and often after needle operation had been done for secondary cataract.

Of the 323 sclero-corneal operations, the acuteness of vision was tested in 184, and was as follows;

In	3	cases.....	V =
"	4	"	" =
"	9	"	" =
"	19	"	" =
"	42	"	" =
"	43	"	" =
"	36	"	" =
"	10	"	" =
"	12	"	" =
"	4	"	" =
"	2	"	" =
Total	184		

In the remaining 139 cases, in which vision was not tested, it is probable that better results were obtained, since

many of those in the above list had returned to the hospital on account of defective vision.

In ninety-five cases the course of events was less favorable.

Of these 26 recovered after rather severe iritis, leaving vision at least temporarily a good deal impaired. How many of them would require subsequent operative interference, I have had no means of ascertaining, but it is worthy of note, that in eleven instances the cause of the iritis seemed evident. Thus in four the incision had been made relatively too small for the size of the lens, in four others a considerably quantity of lens matter remained in the eye, and in three the iris was entangled at one corner of the wound.

Twenty suffered from severe iritis, leaving closed pupil, but good perception of light with a fair prospect of useful vision after an operation for artificial pupil in eleven of them, but nine were practically lost. The apparent cause of the iritis was only noted in five instances, and was smallness of the incision necessitating use of scoop in two cases, the presence of fragments of lens in the eye in two others. The fifth seemed to be the result of an inflammatory process beginning in the wound of cornea. In seven cases hæmorrhage into anterior chamber occurred several days after the operation, but without serious consequence, except in one instance, in which the bleeding seemed to be caused by an inflammation of the iris, it was repeated on several times and resulted in almost complete closure of the pupil with vision reduced to quantitative perception of light, the eye was probably lost.

Acute Panophthalmitis with total loss of vision followed the operation in 13 cases. Probably induced by constitutional cachexia in two instances, which occurred in feeble broken down work-house patients, one of whom lost his eye during an attack of diarrhœa on the third day after operation. In a third case, also a work-house patient in feeble health, the wound had not healed at the end of six

weeks when a small button of vitreous protruded, and shortly afterwards the eye suppurated. The fourth and fifth lost vitreous, and the lens was extracted with difficulty by means of a scoop. The sixth was due to an injury to the eye several days after the operation. The 7th was caused by a detached fragment of iris left in the eye. In the 8th, nucleous of lens was probably not exracted. The 9th perished by suppuration, beginning in edges of the wound. Four others went wrong without any ostensible reason.

Vitreous escaped during the operation or before the bandage could be applied in twenty-seven cases.

Two of these perished as just stated, by acute Panophthalmitis. Eight recovered without further complication. Nine suffered a good deal from inflammatory reaction, but made a fair recovery. In two cases the vitreous was cloudy, but condition of eye otherwise favorable when discharged. In six the reaction was so severe that the eyes were practically lost.

Three eyes perished from intra-ocular hœmorrhage, probably caused by vomiting after the anæsthetic used.

The results obtained in the seventy-five cases of extraction by the oblique corneal method stand as follows:

Forty recovered without any serious drawback. Seventeen recovered with anterior synechia, of which in nine the synechia was partial, in five it extended all along the line of incision, in three it was also complete, resulting from prolapse of the iris.

Four suffered from severe iritis, but made a good recovery.

Four Recovered with closed pupil but good perception of light.

Five lost vitreous and also recovered with anterior synechia, in one of these the lens was removed with a scoop and a good deal of iritis ensued.

Five perished by acute suppurative panophthalmitis.

The upward incision was made in every instance, with three exceptions.

Slight Iritis occurred in most of the cases in which anterior synechia was present, and also in several of those stated to have recovered without any serious drawback. Twice the lens was removed with a scoop without creating any serious mischief.

The numbers are rather disproportionate for instituting a fair comparison between this method and the former, but if the total number of each be divided into three classes, viz :

Good results.

Indifferent results.

Failures.

The good results including 1st, all those cases in which recovery ensued without serious complication. 2nd, cases in which iritis, &c., was not followed by closed pupil. 3rd, Loss of vitreous without other mishap. 4th, six cases of bleeding into anterior chamber, referred to above.

The indifferent results including all the remainder except those already spoken of as lost, it will be seen that there were—

For the Sclero-Corneal Operation.		For the Oblique Corneal Operation.	
Good.....	87 per cent.	Good.....	86.6 per cent.
Indifferent	5. 5 " "	Indifferent.....	6.6 " "
Failures.....	7. 5 " "	Failures.....	6.6 " "

Thus if great things may be compared with small, it will be seen that a remarkable similarity exists in the results of these two operations.

With regard to the flap and scoop operations, they were so few in number that it seems hardly worth while to do more than mention them.

In seven flap operations six regained useful vision, one left the hospital with closed pupil after severe iritis. Vitreous escaped during the operation twice; one of these recovered perfectly, the other suffered from hyalitis. The scoop operations, twelve in number, also for the most

part did well. Six recovered without any drawback except a small quantity of lens matter left in pupil in three of them.

Three suffered from slight Iritis.

One from severe Iritis.

Two lost vitreous, but left the hospital progressing favourably.

There is such a vast array of circumstances capable of influencing the result in cataract operations that even the bare mention of them would occupy more of your valuable time than I could ask you to spare, but if the statistics I have just given serve to show anything, it is that the mere choice of operation is on the whole of no great moment, and I have been surprised to find so little difference in the gross results obtained by different methods, as recorded by other observers. For instance, in Arlt's statistics the variations from year to year in any of the three operations which he has practiced most extensively, are often much greater than the difference between the sum total of results in each. Nor is the fact of having obtained 5 per cent. more good results in the total of his linear operations to be regarded as conclusive evidence in favor of this method, since most of his flap operations were performed between 1856 and 1865, but all his Gräfe extractions were done between 1866 and 1873, during which time, according to his own statement, great improvements have been made in his ophthalmic wards.

If, then, there is nothing much to recommend one operation more than another for universal application, how are we to obtain better results in future?

I think there are at least three ways open, to further improvement.

The first is by paying greater attention to the details of of the operation chosen; for instance many cases are prevented from doing well by the presence of lens matter, blood, &c., in the eye after the operation has been completed. Then there is the great question of anæsthetics. Some operations fail because the anæsthetic works badly, others,

again, because the patient is too unsteady without it. It would be highly desirable to find some less objectionable anæsthetic than those at present in use, or failing in this, to establish more definite rules for their administration.

Second, by choosing the most suitable operation, for it is certain that some eyes are adapted for one method and some for another. There is undoubtly more risk of losing vitreous by the Gräfe, or the scelro-corneal extraction, than by the oblique-corneal, hence, we should choose the latter where we have reason to suspect a weak zonula. A rigid pupil and a large hard lens call for an iridectomy. In such cases we should not choose the oblique corneal, or if determined to adopt this method, it would be safer to perform a preliminary iridectomy a few weeks before the extraction. The linear method is less likely to be followed by necrosis of the cornea, than where a large corneal flap is formed, hence it should have the preference where there is reason to believe the healing power is defective. The oblique corneal is most easy of performance and will therefore better suit an unskilful operator, moreover, it can be done without the aid of an assistant. These are only some of the points to be taken into consideration, but there are many others.

Delayed union is, I am inclined to believe, more commonly met with in the sclero-corneal extraction as figured in the diagram, than in either of the two other incisions. This is proably due to the narrowness of the surface in coaptation at the upper part of the incision caused by cutting too much forward, and to the fact that the upper lid no longer serves to press the cut surfaces together.

Third, in the matter of after treatment, for here there is is still a good deal of difference of opinion. Some surgeons prefer to use no bandage after the operation, others keep the eyes covered with charpie or cotton wool and an elaborate bandage for several days. Some prefer dry dressing, others moist. When to interfere, if the case is not doing well, and to what extent interference is justifiable, often become

most anxious questions. For my own part I believe that excessive reaction can be controlled with something like absolute certainty if combated in time by local depletion and sedatives.

Direct interference with the eye itself, is, I think, only justifiable under exceptional circumstances. Though I admire the boldness of those who make an inspection by focal illumination twice daily, and hope that this zeal in the cause of science may be rewarded by the discovery of improved means for regulating the after treatment, I prefer for the present to act upon the principle of letting well enough alone for a few days at least,

I have more than once succeded in achieving very good results in apparently desperate cases of suppurative iritis after extraction, by means of an apparatus which I have had constructed for supplying cold or heat in a uniform manner to the eye. One such case thus treated by warm fomentations recovered speedily, and ultimately obtained vision = $\frac{1}{1}$.

I am often asked which is the best operation for the removal of cataract. The question is difficult to answer; for although I should give the preference to a scleral extraction with iridectomy, very like that of Von Gräfe, if restricted to a single method, there are undoubtedly many cases better adapted for some other kind of operation. I am therefore of the opinion that in the long run the greatest measure of success will fall to the lot of those who make themselves thoroughly familiar, not with one method of extraction, but with several, and who by taking into full consideration the details of each case are led to form a correct judgment in regard to the course to be pursued; just for instance as in general surgery, no one would think of advocating circular amputation to the exclusion of all other methods, or lithotomy to the entire exclusion of lithotrity.

The public generally, seems to be under the impression that a very advanced age is a strong contra indication to operative interference in cases of cataract.

This belief is not by any means confined to the laity, but exists to an almost equal extent amongst medical men, and is often the means of witholding from the aged and infirm the priceless blessing of that sense which most of all serves to sustain the waning powers, and cheer the evening of life. In conclusion, let us hear what our statistics have to say upon this point.

Of the 510 cases, 116 were 70 years of age and upwards. In 94 of these the result of the operation was good, in 12 indifferent, in 10 it was a failure. The indifferent results and failures were in great part due to some mischance during or after the operation, and in so far only attributable to the advanced age of the patient as that such persons are more lacking in self control than in earlier life. I have more than once seen useful vision restored by operation in persons bordering on niney yeaits of age.

A Case of Acute Glanders. By JOHN REDDY, M.D., L.R.C.S.I., &c., Physician to the Montreal General Hospital.

(Read before the Medico Chirurgical Society, Montreal, 1876.)

On the 14th November, 1875, I was requested to see John G——, practical engineer, a stout, well-built man, who has always been in the enjoyment of good health. For over a year past he was engaged at the Moisic Mines as General Superintendent of the Mechanical Department, and was never ill during that time. States that he left the mines on the 3rd November, 1875, in good health, and arrived in Montreal on the 5th November, 1875, and was then, as he thought, in good health; but on the 9th he felt poorly, experiencing peculiar sensations about his limbs and body not of a painful character, but producing a kind of uneasiness. As they did not last long, he paid no particular attention to them. These continued more or less to the 13th (yesterday), when he was seized with a severe rigor high fever and profuse sweating. I found him in

bed, lying on his back, with a disinclination to assume any other position; his face was slightly flushed, had headache and hot skin, pulse 100, and temperature 100 2-5, tongue clean. His bowels were regular, but he complained of shooting pains on the outside of his arms and legs and right scapula. He had much thirst, and was constantly sipping black currant-jelly water; there was neither cæcal gurgling nor tenderness. His lungs were unaffected, but his respirations were hurried. His intellect was perfectly clear. With the above history, I predicted that most probably it might prove to be typhoid fever, and prescribed a mixture with liquor ammonia accetatis, cold evaporating cloths to his head, milk and beef-tea diet.

15*th*.—Found him a little better to-day: tongue clean, pulse 100, temperature 99 3-5. Other symptoms very much the same as before; the headache had returned. He also complained of soreness and dryness of throat; but unless slight congestion of the tonsils and mucus membrane of the throat generally, there was nothing else to note in that region. His bowels have not been moved to-day.

17*th*.—I was to have had a message yesterday if any change had occurred. Receiving none, called this morning, when I found him bathed in the most profuse perspiration I have ever witnessed. The following account was then given me:—About midnight he had a severe rigor, followed by a period of chilling, severe sensation of cold, which lasted over two hours; then his skin became burning hot and dry, which lasted nearly three hours; and lastly, the intense profuse sweating I found him in commenced. I now banished the idea of typhoid fever, presuming I had to deal wi h intermittent, as he reminded me that eighteen years previously I had treated him for an attack of tertian ague. I immediately ordered quinine in mixture when the fit had subsided—the first dose to be twenty grains, subsequent ones five grains—every four hours afterwards, till relief came.

19*th.*—I again called. He had another lesser attack yesterday, and to-day he drew my attention to a globular swelling, about the size of a goose-egg, under right clavicle extending down to margin of third intercostal space. This had arisen through the night; was exceedingly painful and tender to the touch. I ordered it to be painted with tincture of iodine, and warm linseed meal poultices applied.

20*th.*—A very slight chill occurred during the night. Pulse 92; temperature 99 1-5. He complains very much to-day of weakness and pain of a general character, throughout his body and along his arms and legs. He has much thirst and occasional fever. The poultices and iodine paint have relieved the painful swelling on the chest; he drinks the black currant water, and takes milk and beef tea freely. Diminished his quinine to-day to two grains every fourth hour.

22*nd.*—Pulse 95. Found him sitting up in an arm-chair in his bed-room. Complains of very great weakness; is perspiring most profusely. The bowels are regular. His tongue is slightly furred, and his throat would feel dry but for the currant water. The swelling on the chest has nearly subsided, and is no longer painful. Ordered a tablesponful of port wine every three hours.

24*th.*—Pulse 100. Still complains of the great weakness, and prefers lying on his back; is very thirsty. Has had no rigors the last two days, but the perspirations are unabated. He looks very ill. A new feature is present to-day. Along both arms from the shoulder to the wrist, and from the hips to the ankles, and on the calves of the legs, say about one inch apart, on rubbing over the parts, hard, well defined swellings may be felt, projecting somewhat from the skin, and about the size of very small filberts. They are most painful to the touch, and here and there small dusky, dry erythematous patches exist. There is no abrasion, and the hard tumours do not exhibit any sign of suppurating. From the tip of the right shoulder, and along the supra scapular region, there is to-day another globular swelling, a

little larger than that which existed on the chest, and equally prinful, for this I ordered the same treatment, poultices and Tincture of Iodine. I felt very much puzzled as to the nature of the case, and again entered upon its history, but failed to obtain any fresh light. From the debility and other symptoms present I began to fear that my case would, after all, turn out to be Trichinosis, but he had not eaten pork for a considerable period, and therefore I had to abandon this idea. I examined the urine this morning, it contained no albumen. Substituted brandy for wine.

25*th*—Pulse 104; temperature 102. He was sitting propped up in an arm chair when I came into his room. Said he felt a little better to-day, but his debility was most marked and perspiration very profuse. The tumour in the scapular region is much relieved by treatment. Continue nourishment egg and brandy as before.

27*th*. Pulse 110; temperature 101. Complains of most severe pain in his arms and legs; can hardly bear to be touched, and wishes to lie undisturbed on his back; seems very much depressed in spirits. The tumor over the scapula mentioned on the 24th has subsided, but a similar one to it has just made its appearance equally large, occupying the crown of the head and a portion of right parietal bone; it is very elastic and most painful to the touch. Ordered the same treatment, poulticing and Tincture Iodine. To-day I observe pink streaks (angeiolucitis) along the line of the lymphatics, passing between or along the line of the hard knotty tumors. These I also ordered to be painted with Tincture of Iodine. Treatment to be continued, and support of every assimilable kind.

29*th*.—Pulse 120; temperature 104. He speaks languidly to-day; complains of very great prostration; is very thirsty, and lies altogether on his back. The tumor on the head has almost disappeared, and the tincture of iodine has somewhat soothed the pains in his arms and legs. The lymphatic inflammation has also faded considerably, but the tumours on the head present no physicial difference.

30*th.*—Pulse 120; temperature 103. No change in the symptoms or disease since yesterday. My friend, Dr. Ross, was associated with me to-day in consultation, and experienced the same difficulty as I had in being able to establish a diagnosis or give a name to the disease, only recognizing its generally septicæmic character; a few dark patches of an erythematous character, are here and there observable on the arms and legs and one on the right knuckle between first and second finger which is the largest.

Muriated tincture of iron in thirty drop doses has been added to the quinine mixture to-day, and supporting the system by every available method advised.

Dec. 1*st.*—Pulse 120; temperature 102$\frac{3}{5}$; debility very manifest, and the prespiration profuse. To-day a number of vesicles have appeared on the arms and shoulders, which in the course of a few hours quickly became pustular. They are not unlike small-pox pustules, in the centre the appearance is like thin pus, around this there is a fluid like lymph and a base or margin of a pinkish color. They make their appearance in crops few in numbers, as described above, in the course of four or five hours. I cannot say that the treatment has had any special effect in causing any alteration in the disease.

2*nd.*—Pulse 120; temperature 102$\frac{1}{5}$. Complains to-day of unusual prostration and of much more pain in the joints and throughout the body.

Four o'clock p.m.—Pulse 120; temperature 103$\frac{1}{5}$. No change this morning. The pustular rash was on his face, one large one not unlike a chancre on the side of face near ala of nose on the right side, and a few fresh ones have also appeared. It has also come out on the surface of some of the inflamed patches. Ordered to stimulate freely, &c.

When just about leaving the house his wife stopped us, saying that her husband and she had been considering over his case and its probable cause, and they wished to state that when coming up from the Moisic Mines they had on

board 180 passengers and 14 horses. Ten of these horses were sick with weakness and running from the nose accompanied by a very foul smell—some of them had been sick since the month of June. He was obliged to take care of them himself all the way up. Two horses died and were thrown over-board, and on two occasions he was made to vomit by the stench, on first going into the horses quarters in the morning. We here at once found the missing link supplied, and the nature of the case was now apparent, that it was a case of "acute glanders," and the tumors were farcy buds, now rendering the prognosis most doubtful.

Dec 3rd.—Pulse 120 ; temperature 103 1-5. No change in our patient's state. I examined his urine this morning, it was darker than natural, without deposit ; boiled with nitric acid it turned a beautiful blood red colour, and on settling deposited about ten per cent of an albuminoid substance. There were no salts nor casts, and but few epithelial cells.

4. P.M.—Pulse 120 ; temperature, 103 3-5°. There is very great prostration, most marked as he lies on his back. He suffers greatly from thirst. Complains of pain under his right scapula, has a short cough, and seems oppressed in his breathing. He was too weak to sit up, but on turning him over on his right side dullness on percussion all over right base to centre of scapula exists, accompanied by coarse pleuritic friction sounds, which nearly altogether mask the pulmonary crepitations which may occasionally be heard.

4th.—On calling to-day we found that our patient had died, at 2 o'clock, p.m. After our visit last evening the chest symptoms became worse, his breathing more oppressed ; his strength also began rapidly to fail. About midnight a yellowish fœtid discharge commenced to flow from his nostrils, low, muttering delirium set in, and thus he died. There was no post mortem.

Glanders was known as early as the fourth century, and

was described (though vaguely) by Apsyrtis in the time of Constantine the Great. Its contagiousness was first recognized in 1664, and fully established by Viborg in 1797; and as lately as the beginning of the present century a great difference of opinion existed in France as to the communicability, the Veterinary School of Alfort maintaining its non-contagiousness, that of Lyons the opposite. In 1849 a French veterinary surgeon, Barthelemy, strongly insisted upon its contagiousness, and it was shown beyond doubt, that at this period the yearly mortality amongst the French army horses was something incredible. It had been sought to connect Glanders with Syphilis, Diphtheria, Pyæmia and other kindred diseases, but the researches of Virchow in 1855 to 1863, assigned Glanders to the class of "Granulation tumours"—his views were confirmed by the brilliant researches of Leisering. Experiments have been made at various times to excite the disease in horses by inoculating with pus and other like substances, but without success—while the smallest point of pus, or even sweat from a glandered horse placed in the nostril of a healthy horse will excite the disease; a few exceptions,however, have occurred. It is a very infectious disease, and the term "volatile infectious matter" has been used but not to infer that it is gaseous, but light and corpuscular so as to be carried a considerable distance. The nostrils, larynx and lungs form the direct channels by which the disease enters; it is also communicable where a wound or abrasion exists. The virus when exposed to a temperature of 103 Fahr. ceased to exert any infecting power. A parasitic growth, named Puccinia, a supposed cause, has been discovered by B. Langenbeck; it is found, however, in the nasal secretions, and in the fodder, but lower organisms have been discovered. Bacteria, found in men and horses affected with glanders, Kiener, Hallier, Zurn and Riendfleisch all describe this parasite as existing in the blood, pus, ulcers and abscesses of the lower animals. Asses, mules and sheep are most susceptible of this disease, and in the order mentioned. It prevails alike

in hot and cold climates. A severe epizöotic occurred from 1808 to 1816, which carried off 20,000 horses. In Hungary in 1812, 12,000 horses died, no precautions being taken as the disease was not even suspected to be contagious.

The disease manifests itself in two distinct forms, which are, however, only types of one and the same disease. The first attacks the nose, lungs and neighbouring glands, and is what is called "Glanders Proper." The second affects the absorbents, or lymphatics of the skin of the extremities, or trunk, causing a corded knotty condition known as "Farcy," or "Farcy Buds." The disease appears in from three to six days.

Youatt gives as the earliest sign of the disease: Nasal discharge; first limpid, then sticky and gluey as the disease advances; lastly very offensive. Farcy, he describes as has been already stated.

Formerly the nodules of farcy were considered to be deposits or exudation from the blood, but Virchow, in 1854, demonstrated their neoplastic origin, which view was confirmed by Leiserurg, Foster, and others. In horses a symmetry exists in the manner in which the lymphatics are affected, and in my case the same character obtained.

In man, the two diseases are generally associated, commencing as acute glanders, and followed by farcy, or *vice versa*, and is most frequently attended with an extensive tubercular eruption of the skin of an exanthematous character.

The commencement of the disease is characterized by wandering pains, much fever, great depression, chills and pains, that might easily be mistaken for rheumatism. A fever not unlike typhoid is present, followed by rigors and most profuse, perspirations later on the eruptive stage sets in, which in chronic cases may be delayed for weeks. The most prominent, however, is the glanders eruption, consisting of crops of pustules little differing in appearance from variola. Virchow, however, states that they do so in this respect; they consist of a firm tenacious deposit in

the corium of the skin of a whitish or yellowish material over which the epidermis passes, after a longer interval softening takes place, and small holes are left filled with debris. They very often form in the calf of the leg and on the back, forming very hard masses which frequently escape notice till after death. The discharge from the nose may be late in coming on, being often more apparent than real, as should the patient be in the recumbent posture it may flow down the posterior nares and thus escape detection. The constitutional symptoms near the close are very severe and attended with great exhaustion. The duration of the disease in its acutest form is from three days to three weeks.

In the above summary of the symptoms and signs of this disease, you cannot have failed to recognize the great similarity that exist between them and the case I have brought under your notice

Pathological appearances onthe mucous membrane of the nasal cavities and throughout the lungs viewed by the naked eye, are deposits described as of a tubercular appearrance like miliary tubercles, but under the microscope they merely consist of vascular delicate stroma, filled with round cells like pus cells.

The infiltrated form of glanders (or diffuse form), in many respects, resembles ordinary inflammatory processes having an excess of cellular elements and gangrene of the tissues, recognizable by superficial formation of ulcers, and also of cicatricial tissue; and in the veins of the erectile tissue of the septum nasi extensive thrombi in these vessels occur, which gave rise to the idea that acute glanders is nothing more than phlebitis of the nose, which idea was exploded by the researches of Virchow. The lungs are in this form particularly liable to inflammatory exudations, more particularly in their anterior and lower edges; but this state is oftener met with in the chronic or subacute form of the disease.

Virchow also asserts that the lesions of the lungs form,

as a rule, the final phenomenon of the disease. Bollinger denies the correctness of this opinion, and opposes it; but in my case the pleura and lungs were only invaded at the close, in this instance substantiating that statement.

The deep interest which attaches to this case and its rarity, as well as the great difficulty that for several days occurred in arriving at a correct diagnosis, has induced me to fully report all the details I could glean, even at the risk of perhaps occupying too much of your valuable time. I have looked into the history of glanders, and have consulted several authors. Some give it but a passing notice. I am indebted to Bollinger for his exhaustive article on the subject in *Ziemssen's Cyclopædia*, vol. 3, on Chronic Infectious Diseases; also to articles of a similar kind in *Reynold's Practice of Medicine* and *Holme's Surgery*.

I am not aware of a similar case being recorded in any of our periodicals here; but I find, on looking over the Mortuary Returns for 1875 of the city and suburbs of Montreal, three cases are reported as having occurred,—and it is much to be desired that the medical gentlemen who have observed the other two cases may also place them on record.

Since reading the above I have discovered, on looking over the British American Journal, for 1845, vol. 1, Edited by A. H. Hall, M.D., and R. L. Macdonnell, M.D., a case of Glanders reported by the late Dr. Smallwood, of Isle Jesus, which was recognized as a case of acute Glanders from the very commencement; it ended fatally, and was contracted by attending to glandered horses.

Montreal, February, 1876.

TRANSLATION.

The treatment of Polyarthritis Rheumatica by Salieylic Acid. By Dr. Stricker, Physician to the Charité Hospital, Berlin.

For several months past all the cases of acute articular rheumatism, with well marked local disturbance, taken into the Charité Hospital under Prof. Traube, have been treated

with Salicylic Acid. In every instance not only was the temperature reduced to the normal standard within 48 hours, but what is far more important, all the local phenomena such as pain swelling and redness of the joints were completely relieved.

This mode of treatment is efficacious only in the class of cases just indicated; it is of no avail unless swelling and redness of the joints exists.

In order to insure success the following rules for administering the acid must be strictly observed.

The Salicylic Acid must be pure; that is to say, it must be in the form of glistening white acicular crystals which are quite odourless and form a clear solution in water or alcohol. Impure Salicylic Acid is mueh more likely to act as an irritant to the mucous membrane of the mouth throat and stomach.

The powdered acid must be given in doses of from 8 *to* 16 *grains every hour.* It is best given in capsules. *It must be given till the affected joints can be moved without causing pain.*

To obtain this effect the quantity administered never exceeded half an ounce, and was never less than eighty grains.

There is no doubt it would be safe to administer more than 240 grains, since one patient took of his own accord, as much as 350 grains within twelve hours without experiencing the slightest inconvenience, on the contrary his tongue cleaned and appetite improved. The only toxic effects noticed in any of the cases treated were sweating, singing in the ears, partial deafness, and in a few instances slight hilarity.

Nothing definite can as yet be stated, in regard to the effect of salicylic on the secondary inflammations of rheumatism; most of the cases treated had already suffered from endocarditis. It is probable that after the cure has been effected the patient would do well to continue taking the acid in smaller doses, for a short time at least.

The details of five cases are given, but the course of the disease and result of the treatment was almost exactly the same in the remaining ten cases.

1. *Polyarthritis rheumatica. 3rd attack.—Complete recovery in twenty-four hours.*

R. W., æt 25, painter by trade, has insufficiency of the aortic valves. Was taken ill Dec. 6th, 1875, with swelling and pain in the left ankle joint; admitted into the hospital Dec. 10th. It is probable the heart affection, dated from his first attack of rhumatism in 1870, for he has been subject to palpitation ever since.

There was no evidence of recent endocarditis. The treatment was expectant until Dec. 13th, when the temperature rose to 104.9. Several phalangeal joints of the left foot, the left knee, shoulder and wrist became swollen and slightly reddened, and at the same time exceedingly painful.

Salicylic acid was now administered as recommended above. On the morning of Dec. 14th he had taken 80 grs. Most of the affected joints already presented almost a normal appearance. The patient could move his left hand quickly to and fro without the least inconvenience. There was still slight redness and tenderness on pressure at the inner side of the left knee. Salicylic acid was therefore continued till he had taken 150 grains. At nine o'clock the same evening all the joints were free from the disease. During the previous night, tinnitus, hardness of hearing and sweating had come on and had somewhat increased during the day.

He had not suffered at all from heat or dryness of the throat, difficulty in swallowing or nausea; nor was the epigastrium in the least tender on pressure. The patient remained a few days in the hospital, but without any return of the rheumatism.

2. *Polyarthritis rheumatica cured within forty-eight hours. Endocarditis, when admitted; this was not influenced by the treatment, and gave rise to slight insufficency of the mitral*

valve. Pericarditis became developed at the outset but disappeared under the use of the salicylic acid.

O. R. æt 16, waiter.—Admitted Oct. 25th, 1875, was taken ill on the evening of the 20th. The disease is said to have commenced with a rigor. On the following day both hip joints, and soon afterwards all the large and several of the smaller joints were attackted with violent rheumatic pains.

On admission all the large joints of the lower extremities were considerably swollen and very painful, more particularly, those of the right side. There was also endocarditis of recent origin. Salicylic acid was administered without delay. The following morning at 8 o'clock the patient had taken 80 grains. Both ankle joints and the left hip joint could already be moved freely without exciting pain. The conditon of the knees and right hip was not materially changed. Auscultation now revealed for the first time, a friction murmur which coincided with the movements of expiration and inspiration; it was best heard to the left of the sternum on a level with the fourth costal cartilage, and was undoubtedly due to an affection of the pericardium. Under the continued use of the salicylic acid there was so much improvement that on the evening of the 27th, (240 grains having been taken) patient could move all the joints readily; there was no swelling, and no pain on pressure. The friction murmur had also disappeared. The medicine had caused tinnitus, hardness of hearing and sweating.

The area of præcordial dullness and the heart sounds remained unchanged. Patient was discharged about the middle of November completely cured, with the exception of a slight mitral insufficiency.

3. *Subacute polyarthritis rheumatica with very slight increase of temperature. Acute attack whilst in hospital, rapid increase of temperature together with great swelling and pain in certain large joints. Cure within twenty-four hours.*

H. A. æt 34 locksmith.—Came to the hospital Dec. 9th,

on account of pain in many of the joints, for which he had been treated at home with tincture of iodine, blisters &c., applied to the affected parts. The condition of the joints did not seem to invite the use of salicylic acid and the patient was put upon a solution of nitrate of potash which he continued to take till Dec. 12th.

On the morning of the 12th the carpo-meta carpal joint of left thumb was found to be greatly swollen. The left thumb was swollen stiff and exceedingly painful. The right wrist joint was beginning to swell. This swelling involves the whole of the back of the hand, which is also very much reddened. The fingers can be moved but very little, the wrist joint not at all, on account of intense pain caused by any attempt at movement. Circumference of right wrist joint 3 cm ; greater than of left. The knees, shoulders and elbow-joints are also painful, but less so than the wrist.

Patient now commenced to take salicylic acid in doses of 8 grains every hour. At four o'clock of the same day he could move most of the affected joints with much greater facility. The swelling, &c., of the left thumb was greatly reduced. The thumb could now be moved tolerably freely, as could also the right wrist, which was also less red and tense, but still swollen to about the same extent.

The amount of salicylic acid taken was then 60 grains. The following morning he had taken 120 grains of the acid and was entirely cured. In this case no heart complications occurred.

4. *Polyarthritis rehumatica. Great local disturbance. Cure within twenty-four hours.*

E. D. æt 21, barmaid.—Admitted Dec. 15th, after having been confined to her bed fourteen days ; was immediately put upon the salicylic acid treatment. She was then suffering from high fever, loss of appetite and violent pains in the left wrist and both knee joints, which were greatly swollen, red and tender to the touch. The joy of this patient is better imagined than described, when after taking nine doses of the acid of sixteen grains each at intervals of

one hour, she found herself completely restored to health. No tozic effects of the medicine occurred.

5. *Polyarthritis rheumatica. Two attacks. The first cured in forty-eight hours. The second in twenty-four hours.*

W. T. æt 36, journeyman tailor.—Was suffering when admitted from an acute rheumatic inflammation of all the large joints, and nearly all the small joints of the hands and feet. He took the acid, but not according to directions, so that from the evening of the fifth to the evening of the seventh only 130 grains had been administered. Notwithstanding this I found him free from pain on the morning of the eighth.

Patient left his bed Oct. 9th, but on the 17th a fresh attack occurred, in which there was great increase of temperature, and severe inflammation of the right wrist and knee joints. On Oct. 18 he took 80 grains of the acid which sufficed to effect a cure. He was discharged from the hospital, well, on Oct. 28th.

F. B.

Hospital Reports.

MEDICAL AND SURGICAL CASES OCCURRING IN THE PRACTICE OF THE MONTREAL GENERAL HOSPITAL.

Case of Suppurative Pyelitis—Sinuses Opening Internally, and communicating with Pelvis of Kidney. Under DR. FENWICK. Reported by J. D. CLINE, A.M., M.D.

S. L., æt. 34, labourer, was admitted into hospital on February 1st, 1876.

Two years ago his trouble began with pain in left loin, and subsequently frequent micturition and passage of pus and blood occasionally with his urine. A swelling occurred in the loin, which was opened fifteen months ago. A drainage tube was introduced while he was in another hospital, and there has been a discharge from the two openings ever

since. At present he has to make water every hour at least, and more frequently at night. The pus in his urine is very thick, ropy and greenish. The patient is much reduced in flesh and weight; appetite pretty fair. One opening is about 2½ inches above the middle of the crest of the ilium, and the other 1 inch in front of the anterior superior spine of the ilium. These were found to communicate with each other, and a probe through the upper one could be passed down very deeply. Dr. Fenwick judged from the character of the pus in the patient's urine that it came from the pelvis of the kidney, and also from the history of the case, the directions of the sinuses and the fact of their not having tended to heal in so long a time that the sinuses communicated with the pelvis of the kidney. The Doctor introduced a drainage tube, and ordered for the patient Iron and Quinine, Cod-liver oil, and a nutritious diet, with one pint of ale daily.

The patient's condition remained apparently the same till the 15th of February, when he complained of a sore throat, and at the same time rapidly became very much prostrated. As there had recently been a case of diphtheria in the hospital, his throat was carefully examined lest this should be another. No trace of diphtheritic membrane was found. The tonsils and soft palate were red and swollen. He was ordered a gargle of Tinc. Ferri, Mur. ℥ij to aquæ ℥viij and the following Mixture:

℞ Pot. Chlor. ℥i; Tr. Ferri. Mur. ℥ij; Quinae grs. xii; Aquæ ad ℥vi; of which he was to take a tablespoonful every three hours. He was also ordered 6 oz. brandy daily. The soreness of his throat was much relieved next day, but he gradually became weaker, and died on the 17th.

AUTOPSY 12 hours after death,—Cadaveric rigidity well marked. Body extremely emaciated and anæmic.

Lungs contained several nodules, which were caseous in their centres. Heart flabby. Valves healthy but coronary arteries very hard. Liver very much enlarged, weighing 6 lbs, presenting the appearance of amyloid disease of that

organ, and yielding the characteristic reaction with iodine. Spleen large and hard, weighing 9 ounces, also amyloid. Right kidney large, weighing 8 ounces, and amyloid. The arteries also hard and rigid. When the bladder was removed and the left ureter was dissected up to the kidney, the latter was found to be firmly adherent all around by inflammatory tissue. In removing it a portion tore near the entrannce of the ureter, and allowed some pus to escape. This vent was found to communicate with a sinus reaching through the muscles of the loin. This sinus was then opened up with the knife and found to lead to the external openings. The walls of the bladder were thickened. The bladder contained a quantity of putrid pus, and its walls internally were softended and sloughy. The ureter was as large as a man's finger and its canal very large. The pelvis of the kidney was filled with thick pus, and the pyramids were entirely broken down and their places filled with thick pus, and communicating with rent spoken of above.

Case of General Tuberculosis—Tuberculosis Uterus—Death from Meningitis—Autopsy. Under the care of DR. FENWICK. Reported by J. D. CLINE, B.A., M.D., Assistant House Surgeon, Montreal General Hospital.

Louisa Sovereign, aged 26, was admitted into hospital, Jan. 5th, 1876. She complained of a slight leucorrhœa, amenorrhœa and general dibility. She had been in hospital for the same thing eight or nine months ago under Dr. Reddy. At that time she was very emaciated and a very delicate looking girl. By examination with a speculum the os uteri appeared natural—perhaps small. The uterine sound was not used. At this time the patient suffered a good deal of pain in the back and tenderness over body of uterus. No enlargement of body was detected. A vaginal injection of zinc : sulph : was ordered her with rest in bed and a general tonic regimen. After two months treatment she improved very little, and was taken down to

the salt water by her friends. The pain had disappeared, however.

The patient was a small woman of very frail build, unmarried, and a virgin. No history of tuberculous taint in the family could be made out, but one of her sisters was dwarfed by a curvature of the spine. When in hospital the first time she had no cough and her lungs were not examined. On her admission the second time she was much more emaciated than before and more feeble. Still the only thing she complained of was her uterine trouble. Nothing more was made out about her uterus than before. A vaginal injection of zinc: sulph: was ordered, and a tonic of iron and quinine. When she had been in hospital a short time the nurse called Dr. Fenwick's attention to a cough which she had, and on examination there were found evidences of tuberebcle and softening all over the lungs. The respiration was very harsh, creaking and leathery, with prolonged inspiratory murmur all over the chest and a few moist rales at parts. The note in percussion was equal on both sides but tubular. Dr. Fenwick ordered cod liver oil and a sedative cough mixture. On Jan. 26th the brain symptoms set in. She became sleeples, restless and nervous, starting every now and then and afraid to be left alone. On the night of the 27th this restlessness increased, and she would start frequently with a peculiar cry. I immediately suspected tubercular meningitis, and found at that time the macula cerebri of Trousseau well marked. Her bowels were constipated. There was no vomiting. On the third day after the appearance of these symptoms there was strabismus of of the right eye. She was gradually becoming comatose, and on the fifth day could not be roused at all and could scarcely be got to swallow a spoonful of nourishment. Her sphincters became relaxed. Before this stage she had complained of pain in the occipital region, and her head was constantly retracted. She gradually sank and died on Feb. 4th, at 11:15 p.m.

AUTOPSY.—Two hours after death the brain was first examined, and the ventricles opened before it was removed.

There were eight ounces of fluid in the ventricles, which were very much distended. There was no central softening, except in the septum lucidum. The surface of the brain was congested especially at the base. The membrane here was much thickened and opaque and studded with miliary tubercle in the central portion, as well as in the fissures. There were three or four purulent deposits under the membrane. There were several nodules of tubercle in the substance of the brain, varying in size from that of a split pea to that of a bean; one in the left thalamus opticus, one in the anterior lobe of right hemisphere at base, one in upper surface of cerebellum and another in the posterior and inferior part of left hemisphere.

The Lungs were found to be studded with tubercle of the grey variety in various stages of degeneration in parts. Nowhere was there a cavity larger than a bean. Nodules of tubercle were found in the capsule of the liver.

Kidneys were healthy.

The Uterus.—The body of the uterus, before removal, felt enlarged and soft, and was rather firmly fixed by peritonitic adhesions. On section after removal the cavity was found to be large—about 2 inches long by 1½ inches wide, and the internal surface presented a ragged ulcerated appearance, like the sac of an old abscess. It was of a dirty greyish color and covered with a tenacious discharge. Yellowish cheesy-looking projections extended into the walls of the uterus. The walls were soft and friable. The right wall particularly was so soft that a probe could be easily thrust through it. The whole muscular structure here appeared to be degenerated. The ovaries presented much the same appearance, ulcerated and degenerated internally. There was a cyst as large as a walnut on the right fallopian tube.

Remarks.—From the history of the case, there having been no evidences of tubercle in any organ but the uterus till recently, and from the post mortem evidences of the tubercle in the lung and elsewhere being recent while the uterus was in an advanced stage of degeneration, it appears that the tubercle must have been primary in the uterus.

Reviews and Notices of Books.

Annual Reports on Diseases of the Chest. Under the direction of HORACE DOBELL, M.D., Consulting Physician to the Royal Hospital for Diseases of the Chest, &c., &c., assisted by numerous and distinguished coadjutors in different parts of the world. Vol. 1, June 1st, 1874, to June 1st, 1875. London: Smith, Elder & Co., Waterloo Place, 1875.

We have acknowledged the receipt of the above work and at the same time drew our readers' attention to the plan which the author proposes to himself to follow, and desire to add now a few more words, to explain more fully the nature, of the contents and their value.

Dr. Dobell, who is already well known from his various writings, as one who has for a very long period devoted his attention to Diseases of the Chest, has for the purpose of compiling the work, been in communication with eminent physicians in every quarter of the world. It can readily be understood, therefore, what a large accumulation of material has been placed at his disposal. Indeed it would hardly be saying too much to say that every observation, investigation, or idea of any importance, which has been anywhere brought to light within the contained year, finds a place in these pages. Of course the field is an immense one, and includes considerations regarding a very large number of different complaints. Remarks and reports of cases are to be found bearing upon the pathology, etiology, diagnosis, treatment, mode of distribution, &c., of the tongue, tonsils, larynx, lungs, pleuræ, bronchial glands thyroid and thymus glands, heart, &c. In each section these are carefully arranged, condensed if necessary, and at the same time full references given, so that any given subject can at once be further enquired into by one seeking

the information. The book is also furnished with a very complete analytical index, so that all that in any of the sections bears upon any particular point, can be at once turned up and examined. It is these features in the book itself which gives to it the value it possesses; because, from its nature, it is of course a book of reference, and it is so constructed as to render this as easy and ready as it is possible to be.

Thoracic diseases afford always and everywhere a very large proportion of all the cases we have to treat, and from the very serious, and often unfortunately intractable nature of so many of them, it behoves every scientific practitioner to keep himself well informed of all the rays of light which are from time to time brought to bear upon them. In accomplishing this he cannot fail to derive great assistance from this compilation of Dr. Dobell.

As we should necessarily expect, the greater portion of the book is taken up with extracts from the leading British Medical Journals, composed of the most interesting cases therein during the time specified, as well as of the most important papers, communications, and discussions which appeared in these journals.

We are glad to find our own country well represented by a report from the pen of Dr. R. P. Howard, embodying the reports of several interesting cases which had been published in our local journals, as well as an excellent paper by the same gentleman, upon the pathology of Tubercle, which was read before the Canadian Medical Association.

Chemica Coartata; or, the Key to Modern Chemistry.—By A. H. KOLLMYER, A.M., M.D., Professor of Materia Medica and Therapeutics at the Uuiversity of Bishop's College; Professor of Materia Medica and Pharmacy at the College of Pharmacy, &c. 8vo., pp. 99. Printed and published by J. STARKE & Co., 54 St. Francois Xavier street, Montreal, Canada.

This is a convenient and handy little book of reference containing a large amount of information ready at a

moment's notice, and easy to be reached, and is given in short, terse sentences, intended, as the author says, to be adapted to the wants of students to refresh their memories before examination, and others who have not time sufficient to devote to the searching through larger works. There is a great deal that is useful in the work before us, but we do not quite like the classification of the metals adopted by the author,and think that a classification based more upon their chemical relations to one another, would have been better. As the author classifies them as monads, dyads, &c., he brings together an incongruous mixture of metals, having no bond of union, as the introduction of argentum with the monads, with which it has no relation in common; the characters of the other monad metals are all in relation and might be in a group by themselves, whilst silver would more properly belong to a group of the noble metals.

The potassium group,or group of the metals of the alkalies, are all soft, easily fusible metals, oxidizing readily at all temperatures in the air, and decomposing water at all temperatures—forming freely soluble oxides, which readily combine with water, and form hydrates, from which heat alone will not drive off the water, and their oxides can not be decomposed by heat. These oxides rapidly absorb carbonic acid. The sulphides of these metals are soluble; whilst silver and the noble metals do not oxidize in air; their oxides do not form hydrates; their oxides do not absorb carbonic acid; their hydrates can scarcelv be dried even with great care, and their oxides are reduced to the metallic state by heat alone.

Their sulphides are insoluble.

Similar objections hold good in the other group; among the Dyads,—copper, lead and mercury have no relation to Calcium, Barium and Strontium.

In the Triads: Gold has no relation to Alluminum.

So in the Tetrads—Iron, Nickel, Cobalt and Manganese have no relation to Platinum, &c.

The Pentads do come together better, but among the

Hexads, Molybdenum and Chromium are not naturally associated. There are some things we should like to see a little more fully explained, and some others which we must take exception to. Water is usually described as a colourless not bluish fluid,—whilst Iodine is usually said to be possessed of metallic lustre. Under the head of tests, we find numerous omissions of good useful tests,—such as the omission of the nitroprusside of Sodium as a test for sulphur, after first converting any sulphur present into an alkaline sulphuret by fusion on charcoal in the deoxidizing flame of the blowpipe, to reduce any sulphate to the condition of sulphide lixiviating the residue and then applying the nitropruside.

The precipitation of Boracic acid by Hydrochloric or sulphuric acid in a strong solution of a borate. The fact that silicic acid dissolves in a sodic carbonate bead, before the blowpipe with effervescence and evolution of carbonic acid, rendering the sodic carbonate bead transparent when cold as well as when hot.

There are other tests the absence of which we notice and suggest that the author should add them:

Under the head of Potassium, the carbazotic acid test is scarcely less delicate than the Tartaric. The introduction of "Chrome yellow cakes at 80°," under the head of Properties, on page 25, of Potassium tetroxide is probably a typographical error, as chrome yellow is a lead salt.

We should fail to recognize the metal Sodium from the Properties on page 39.

Whilst we think that so largely used a preparation as Sodium Hydrated Oxide deserves a larger share of notice than is awarded it, it might have been honoured with a line to itself, and a little more information about its manufacture.

Also under the head of Borax, its old commercial name of Tincal might have been given, and some of its uses as in soldering, and its property of disolving metallic oxides, and hence its use in the Laboratory to form beads before the blowpipe, for testing metallic substances and their compounds.

Under the test for ammonia we should have expected to find that its vapour was aklaline, and that any of its salts warmed with Caustic Potash, Soda, or Lime, yield a vapour with alkaline reaction to litmus and odour of ammouia,—the only alkali volatile at ordinary temperatures, and also that the yellow precipitate formed by silver nitrate was soluble in excess of ammonia.

Under tests for Silver, we should have expected to have the metallic globule obtained on charcoal with carbonate of soda and a blowpipe, characterized as malleable.

Under the tests for alumina we must take exception to the statement that any salt of alumina with cobalt nitrate gives a characteristic blue bead with the blowpipe; before the blowpipe on charcoal in the oxidising flame, salts of alumina leave a white infusible residue of alumina incandescent when in the flame, and which residue, moistened with a solution of nitrate of cobalt, and reheated in the blowpipe oxidizing flame gives a beautiful blue colour to the infusible residue, but does not form a bead.

Under Uranium Salts :

"Borax and Phosphorous Salts with Salts of Uranium will form a green glass," we presume is meant. Borax or Microcosmic Salt, with an Uranium Salt will give a yellow not "green" bead. No mention is made of the colour of the Borax bead formed with Nickel Salts. The use of cobalt in the formation of Smalt blue is omitted, and also the colour of its Borax bead, before the blowpipe.

Under the head of Antimony, Sulphuretted Hydrogen is left out as a test, although it is a test of the group of metals precipitated by that reagent in acid Solutions.

Also the fact that that sulphide is soluble in excess of Sulphide of Ammonium. The same omission occurs as solubility of Arsenic sulphide.

One of the chief characters of Bismuth salts, that they are precipitated by large dilution is not mentioned whilst a black precipitate by sulphuretted hydrogen is given as characteristic. We thought that lead, copper, silver, &c.,

were also precipitated by the same reagent, the same colour, and under the same circumstances.

There are some other matters we think might be improved.

The latter section devoted to organic Chemistry is very concisely written, and conveys a very good idea of the arrangement of a very intricate subject, altogether we can commend the book to the class for whom it was written. The type is clear, legible and distinct, and for a work of the sort is remarkably free from typographical errors ; we think the shape might be made more in consonance with most libraries, and trust the author may reap a rich reward for his labours in endeavoring "to stimulate students and "others to a more thorough investigation of this noble science."

Periscopic Department.

SURGERY.

Curious case of Mutilation. By OLIVER PENFOLD, M.R.C.S., Eng.

This occurred some months ago, and created a considerable sensation at the time, from the mysterious circumstances surrounding it. As I have not found any similar case mentioned in the text-books I have consulted on the subject, I think it is sufficiently unique to be recorded.

The patient a girl 18 years of age, employed as a barmaid at a hotel, stated that she had washed her hair at ten o'clock at night, and went to bed in an occasional bedroom, not her usual one. It was in a position fairly accessible from the street. She said that she awoke about 3 a.m., and noticed two men covered with crape bending over her and cutting her hair off, her mouth was gagged by a comforter placed over it, and her hands held by the wrists.

She endeavoured to scream, and shortly afterwards the candle was blown out and the men left. She then ran out from her bedroom in her night dress, and rattled a locked door near her uncle and aunt's bedroom, screaming lustily. Her uncle soon came out and found her in a greatly excited state, and crying out that her hair had been cut off. Search was immediately made, but neither the persons alleged to have committed the outrage nor the hair was to he found. I did not see her until some hours afterwards, but her uncle said that the hair had been hacked off irregularly, so as to expose the scalp more or less in different parts· A barber had been sent for, and he had shaved the middle of the scalp, leaving a tonsure of short black hair about two inches long, and over all he had placed a wig of false hair. The shaved scalp was studded with the bases of pimples, whose apices had been removed by the razor. It was a little puffy, and amongst the short hair were a few pimples, presumably like those on the shaved scalp. There were two swollen glands, one on each side of the neck, about the middle of the sterno-mastoid muscle. No marks of violence could be seen on her lips or wrists. She is quite capable of resistance. She trembled greatly while being examined, but told her story in a straightforward manner. She suffers from menorrhagia, and frequent headaches, and is in the habit of sleeping with her face covered by the bedclothes, and is very hard to arouse from sleep. She bears a good character and is habitually temperate. Six years ago, after a fever she had her head shaved. She had fine black hair. On one occasion she walked in her sleep from one room to another. Her sister is a somnambulist. No spite was known to exist against her. The servants who slept in adjoining apartments did not hear any noise before she screamed during the night. The bedroom was examined. No traces of a struggle were visible, and no hair could be found on the pillow or upon the bedclothes. She had borrowed a blunt pair of scissors before going to bed. In front of the looking-glass on the dressing table cover,

was a good deal of short black hair, and there was some on the floor close by.

I believe that she cut off the hair herself, wishing to gains ome notoriety, but finding herself greatly disfigured, she became frightened and made all the disturbance.

Sandhurst, Oct., 1875.

Australian Medical Journal.

On a case of Osseous Tumour, removed successfully, with Antiseptic Precautions, from under the Ligamentum Patellæ. By THOMAS ANNANDALE, F.R.S.E., Surgeon to the Edinburgh Royal Infirmary and Lecturer on Clinical Surgery.

The following case seems to me well worthy of a special report, for two reasons: first, from its great rarity; and, second as an illustration of the value of antiseptic treatment in operations on or near important joints.

D. D., aged 62, was admitted into my wards on the 19th September, last. Three years before his admission, he observed a small swelling at the lower part of the anterior aspect of his right knee-joint, and since then this swelling steadily increased in size, and from its bulk lately became troublesome, and interfered with the proper movements of the joint.

An examination determined the existence of a tumour on the anterior aspect of the joint: it was of the size of two closed fists, was hard to the touch, and was circumscribed and free on all sides except at its base, which appeared to have a firm attachment to the head of the tibia. The tumour when grasped felt quite fixed to the bone when the knee was flexed; but as. in the extended position of the joint, it admitted some lateral movement, it was evident that no real connection to the bone existed. The patella was displaced upwards and inwards, and could be felt immediately above the tumour. The movements of the joint were limited, especially that of flexion. On September 22nd, I exposed the anterior aspect of the tumour by a free incision carried along its outer aspect, and a second transverse and smaller one in a direction inwards across the front of the knee. The first incision was made down to the tumour, in a direction parallel and external to the ligamentum patellæ and patella. The second one was superficial, and only divided

the skin and cellular tissue. The object of these incisions was to thoroughly expose the tumour, and, at the same time, avoid as much as possible injury to the synovial membrane of the joint and to the ligament of the patella. When the tumour was brought into view, it was found that the ligament of the patella was stretched over it, and ran along a groove on its superficial aspect. The tumour had apparently originated in the bursa under the ligament, and the connection of this ligament to the tumour explained its fixed condition, which simulated an osseous attachment. By careful dissection, I succeeded in removing the tumour without injury to the ligament; and, although a large surface of synovial membrane was exposed, the cavity of the joint was not opened into.

The operation was performed under the carbolic spray, and the wound was dressed with the usual precautions. Not the slightest local or constitutional irritation followed the operation, and the patient was dismissed on October 29th, the wound being soundly healed, and the joint and limb perfectly movable and natural in every respect.

REMARKS.—From the history and situation of this tumour, I am inclined to think that it originated in connection with the bursa under the ligamentum patellæ. Fibrous enlargements of this bursa have been recorded, but the occurrence of an osseous growth in this situation is not referred to in recent works on surgery. The tumour had no attachment to, or connection with, any bone; and it may, therefore, be classed under those isolated osseous growths sometimes met with in the areolar and other textures, and of which Paget (*Lectures on Surgical Pathology*, 3rd edition) remarks, that they "are interesting for little more than their rarity."

The successful result obtained in this case, and the perfect recovery of the patient with a completely movable joint, must be attributed, in my opinion, to the employment of antiseptic precautions. By no other means do I think that so free an exposure of the synovial membrane could have been made without the slightest irritation resulting. *British Medical Journal.*

Case of Paracentesis Pericardii; Recovery.

The fact that the operation of tapping the pericardium for the removal of effused fluids is still *sub lite* renders the record of every case in which this operation has been performed peculiarly valuable and interesting, whatever the

ultimate issue. In the subjoined case the benefit derived from the treatment was marked, and it is scarcely too much to say that the patient's life was actually saved by drawing off the serous fluid, which was found to measure forty-two ounces.

For the notes of the following interesting case we are indebted to Mr. Thomas Elliot, M.B., late house-surgeon n the Bristol General Hospital.

John M———, aged 60, a carpenter, was admitted into Bristol General Hospital, on April 26th, 1875. Forty years ago he had rheumatic fever, and again two years later. His heart, he stated, was affected two years prior to the first attack. After these illnesses he enjoyed very good health till the close of the year 1874. He served as an "army carpenter" out in the Crimea, where, to use his own expression, he had "a lot of rough work." A month before Christmas, 1874, he was confined to bed for a week with rheumatism. For the two months prior to admission he had been "complaining," and troubled with a cough, and two weeks before admissin his feet and legs began to swell.

On admission there was general anasarca, shortness of breath, and a feeble pulse. Heart-action rapid and irregular, with an indistinct systolic mitral bruit. Lungs anteriorly resonant, posteriorly resonant at right base, dull at left base; respiration exaggerated over right side, tubular at left base

On April 28th the patient was much worse, apparently moribund. Breathing very oppressive, and could only be carried on when the man was lying on the left side, and slightly on his face. The face was of a livid colour; veins in neck full and tortuous, but not pulsating. Heart's apex could not be seen or felt; area of dulness greatly increased, but difficult to define on account of external œdema. The sounds were very distant and indistinct, almost inaudible. Lungs resonant anteriorly and at right base, dull at left base; respiration exaggerated over right side, tubular at left base; no appreciable difference between the two sides in conduction of voice sounds.

From these symptoms and signs Dr. Burder concluded that the patient's great and immediate distress was due to dropsy of the pericardium, and that therefore paracentesis should at once be done. The operation was performed by the house-surgeon (Mr. Thomas Elliot) by means of Dieulafoy's pneumatic aspirator, the needle being inserted between the fifth and sixth ribs, and an inch to the right of

the nipple. Forty-two ounces of clear, pale straw-coloured fluid were drawn off. Towards the close of the operation the apex of the heart was felt to strike once or twice against the needle but it ceased on placing the needle more horizontaly. It is here worth stating, especialy from a practical point, that for cases of paracentesis the needles of the aspirator might with advantage be graduated. At times it is extremely difficult to estimate how far the needle has penetrated, as it was in this case, where there was a considerable amount of external œdema.

The patient expressed himself as easier after the operation,but it was not till some hours after that there was any marked improvement.

On April 29th the patient looked much better ; the face was of a better hue, breathing much easier, and he could lie on either side or on his back. Respiration 50 per minute ; pulse feeble. Dulness over base of left lung diminished, and not extending so high upwards. Respiration over same region much more audible, with some moist sounds. Area of heart's dulness definable, sounds not so audible as immediately after tapping. On April 30th the improvement was much greater, the pulse was much stronger, and the general anasarca had gone down a good deal. On May 2nd he said that he had slept but little the last two nights, on account of continued coughing, but the next night he slept much better. On May 3rd he could lie on either side, but said that if he did so he must be well over on his face, but he preferred lying on the left side. Heart-sounds indistinct ; lower extremities more œdematous

From this time he continued to improve, and on May 31st the dropsy had entirely disappeared and the heart's apex could be seen and felt beating about an inch below the left nipple. The area of dulness was definable and greatly diminished ; the sounds were louder, and an indistinct bruit, apparently louder towards the base, but not carried up along the large blood vessels, could be heard. There was still a line of dulness posteriorly at right base, where also the respiration was feeble. After this he sat up daily, but if he made any exertion he suffered at once from dyspnœa, and palpitation. The heart's beat was less distinct and was more to the outer side of left nipple than before ; sounds irregular and confused.

On July 6th he was discharged as an out-patient, much improved, and able to move about more freely.—*Lancet*, Jan. 8, 1876.

CANADA

Medical and Surgical Journal.

MONTREAL, MARCH, 1876.

THE SPREAD OF INFECTIOUS DISEASES IN SCHOOLS.

Some interesting discussion is going on in the columns of some of our exchanges on the subject of the spread of infectious diseases amongst school children, and the best means of preventing such an occurrence. We should suppose that strict isolation and careful cleansing of the premises, is the only means at our disposal. There is no law in this country which will guide the people or force on the people, the adoption of common-sense views on the subject; hence, we constantly hear of small-pox, scarlet fever, measles or whooping cough, breaking out amongst the children of certain public or private schools. Some of these affections are mild in their attack, and somewhat obscure in their mode of propagation; but usually, we feel certain that, if carefully traced, invariably they will be found to originate from some contagious source, at least such is our own experience. Quite recently a little girl showed symptoms of whooping cough, severe in its attack. In the course of a few days three or four other children in the family were similarly afflicted. It was undoubtedly whooping cough, but how had the disease been contracted? After some careful inquiry it was definitely learnt that at the school which this little girl attended, several children had been taken ill and were all afflicted with symptoms of whooping cough. The disease had apparently spread from one to the other with great rapidity. Many instances of the spread of infectious diseases could be enumerated, but they

are sufficently common to be admitted by all. The practical lesson to be learnt by these observations, is the necessity of isolating all children who have been exposed to the contagion of infections disease. In well ordered communities, where sanitary regulations are enforced, if an infectious disease breaks out in a school, a health officer would make it his business to warn the school authorities of the condition of things, and advise that all children suffering from infectious disease, or who had been exposed, should be put on the sick list and perfectly isolated.

ATHLETIC SPORTS.

The London *Lancet* calls attention to the danger attending the game of foot-ball as played at the present day, when the rules of the game as adopted at Rugby are introduced; it states that it is simply an exhibition of brute force, and that a strong, powerful team are sure to be the winners. This would be a matter of small moment were the sport unattended by more serious results, but we constantly hear of broken arms and dislocated joints, and in one sad instance which occurred last summer on the College grouud, a promising young fellow met with so severe an injury that it was followed by peritonitis and death within a few hours. Now we are fully alive to the beneficial results of athletic sports, and believe that they are in every way conducive to health, both of body and mind, but while our young friends indulge in foot-ball and other athletic sports, let those who possess greater muscular power than their neighbors, bear in mind that the human frame is delicate in its construction, and quite open to injury, if excessive force is applied in any particular direction; and also that such injuries may be attended by permanent disablement or death of a fellow mortal. And with regard to those whose business it is to lay down the laws of the game, we should admire their reconstruction so as to expunge all objectionable features. We have thought it well to caution our young friends on this subject as we suppose at the opening of spring, and

with the disappearance of our winter covering, the *green* will exhibit as many merry faces, and the youths and boys of our colleges and schools will be as anxious as ever to devote a portion of their spare time to the customary field sports.

TO CORRESPONDENTS.

We have been requested to pronounce an opinion in reference to the letter which we published in our last, emanating from the pen of Dr. Worthington of Sherbrooke. That gentleman, with his acute sense of the ridiculous, discusses the propriety of smelling the breath in order to make out a brain lesion. Now we feel certain that Dr. W. is the last person who would willingly and studiously offend a fellow practitioner, and in affording our readers a chance of some amusement, he carefully excludes all names, so that the bare facts of the case are given, and they are somewhat amusingly put. But after all there is nothing in the quotation that he takes from a Sherbrooke paper, but what any practitioner might endorse. If the writer believed that alcoholic draughts, little or much, would occasion injury to the brain, we do think that he was perfectly justified in his line of procedure, in order to discover how much of the symptoms present depended on the injuries to the head, which were quite apparent, and how much was due to the free imbibition of alcoholic beverages. If Dr. Worthington will excuse us, the idea is not an original one, it is a process of examination recommended by all the books on the subject.

DEATH OF SIR G. DUNCAN GIBB, BART.

It is with regret we chronicle the death of our old friend and former colleague George Duncan Gibb, which event took place at his residence Bryanston Street, Portman Square, London, England, on Wednesday, 16th February ult, after a lingering illness of some nine or ten months. We have not received any particulars, but some time ago it was announced by the *Lancet* that Sir Duncan, in consequence of ill health, was obliged to resign his connec-

tion with the Westminster Hospital, he having been appointed Physician to that institution on the demise of the late Dr. Anstie. We defer any further notice of our old and esteemed friend until our next issue. Sir Duncan was, we understand, about to have published a new and enlarged edition of his work on diseases of the throat and windpipe. In a private letter which we received from him not very long since, he stated that he was engaged in revising his large work on that subject, and that when published it would be an entirely new treatise.

THE UTERINE ELEVATOR.

There are few diseases of the uterus which so thoroughly incapacitate the female to attend to her daily avocations, or which render life a burthen to herself and those around her, as falling of the womb. This proceeds in a great measure from a relaxed condition of the tissues around. It is a fact that forcible abdominal pressure, as in the act of lifting heavy weights, is attended in the female with a transitory or physiological descent of the uterus; but so soon as the pressure from above is removed the natural elasticity of the parts will enable that organ to regain its position. Frequent repetitions of this process of forcible propulsion of the womb downwards, and inversion of the vagina will be attended by most disastrious consequences. But prolapsus or displacement of the uterus downwards does not only depend on this condition of relaxation of the parts and forcible propulsion. For the relief of this condition various mechanical means have been introduced, and there is hardly a man who has devoted his time and energies to relieve these displacements that has not invented and recommended some form of mechanical support. Very little can be done surgically in the majority of these distressing cases. In noticing the improved Stem Pessary or uterine elevator of Dr. H. H. Burrington, we do so in consequence of having witnessed its beneficial use in a severe case of Procidentia. Our patient had made trial of several supports, but all seemed not to answer her case; we sent for and obtained one of Dr. B.'s instruments, and our patient has had perfect ease and comfort ever since it was applied.

CANADA
MEDICAL & SURGICAL JOURNAL.

ORIGINAL COMMUNICATIONS.

Case of Leucocythæmia,—History and Autopsy. By JOHN BELL, A.M., M.D.

(Read before the Medico-Chirurgical Society.)

Amongst the patients, at the Montreal Dispensary, when I commenced attending for the quarter beginning April, 1875, was Henry G., a French Canadian, 56 years of age, who was, and had been suffering from ascites and dropsy of the legs and feet. His illness, I believe, commenced about a year previously. His hair and eyes were brown and his complexion, which had been of the brunette type common to his race, was pale and sallow. His face was thin, and wore a sad and distressed expression which did but little justice to his contented and happy disposition. His body was throughout much attenuated, and contrasted strongly with the round distended belly. After talking for a very short time he was oppressed with want of breath. I examined him only in the erect posture, and discovered what seemed to be a hard nodular deposit on the inside of the abdominal wall, most distinctly felt in the left inguinal region, extending downwards to the crest of the pelvis. From his wasted cachectic appearance, and influenced by the fact that râles were heard throughout the lungs, I thought that he was suffering from tubercular or cancerous infiltration of the peritoneum, and prescribed a pectoral mixture and Iron tonic. There was no pain in the belly, or distress except what arose from the pressure of the fluid on the

stomach and diaphragm. In a short time the lungs cleared up but the condition of the belly remained as formerly. His bowels were sometimes constipated, at other times loose but generally free. The treatment by diuretics, with iron and hydragogue cathartics, was now directed to relieve the discomfort caused by the accumulation of fluid in the peritoneal sac, but with little permanent success.

About the middle of May he sent for me to see him at his own home. He was lying down, and on putting my hand on his belly the nature of the tumour was solved—it was now an enormously enlarged spleen—the notched and somewhat nodulated end and edge of which had been already felt. The liver seemed to be but little if at all enlarged as the edge of it corresponded with that of the ribs—the organ being pushed up into the dome of the diaphragm and overlapped by the resonant lung. There was no enlargement of the external lymphatic glands, but there were cicatricial marks on the neck beneath the left ear. The superficial veins of the abdomen and front of the chest were enlarged and formed anastomoses by vessels of large *calibre*. A fringe of small veins, such as I have seen in cases of hepatic obstruction sprang into view at the edge of the ribs and extend about an inch upwards.

He had lived in the S. W. States about fifteen years ago and in coming to Montreal had been detained a short time at Whitehall on Lake Champlain, where he was seized with intermittent fever, from which, however, he soon and permanently recovered after reaching Montreal. Here, in passing, I may observe that Niemeyer states that "no connection has been proved between this disease (Leucocythæmia,) and malarial infection, or scrofula."

A nourishing diet, quinine and iron, in various forms were now prescribed with the application of the Biniodide of Mercury ointment externally. Under this treatment he rapidly improved; he grew stronger, the ascites and splenic tumour diminished so that he was able to walk a mile down town to his work—that of a saddler. He shortly after this

went to the country, taking with him a supply of medicine, which, by the way, he never used, as he found himself so well—and I lost sight of him until the beginning of November.

I had never read of a case of Leucocythæmia having occurred in Canada, nor was I aware that this rare form of disease had as yet found a victim in this colony.

On the 15th December, at Dr. Howard's suggestion, I examined the freshly drawn blood under the microscope, and found almost the whole field filled with white blood corpuscles, *apparently* considerably smaller (one third, perhaps), than the red. The white corpuscles *appeared* to be several times more numerous than the red ones, but I could not at the time attempt to count the number of each in any area, and would not now like to hazard a guess as to their relative proportion. Niemeyer says, "while, in normal blood, there are 350 red blood corpuscles to one white one, in Leukæmia (as the Germans, after Virchow, and imperfectly, according to Bennett, delight to name this disease J. B.)—the number of white corpuscles may become so much increased, and that of the red ones so much diminished, that the former will become a sixth or even half as many as the latter. In the *splenic* form of the disease the white blood corpuscles are not distinguishable from those of normal blood; they are distinct, well-developed cells. In the *lymphatic* form, on the other hand, Virchow and other observers, found numerous free nuclei and small cells, both of which correspond exactly with the elements found in the lymphatic glands.

In the beginning of November I saw this patient again, and found him very much the same as when he first came under my observation, but now suffering from diarrhœa, as well as bronchitis. The latter was soon relieved, but the former persisted almost continuously until his death. Iodide of Potash and Quinine were now used with iron, and occasionally Digitalis, Squills and Colchicum, as diuretics. As a *dernier resort*, Warner's Pills of Phos-

phorus were tried but with no avail, as the weakness and the œdema of the legs increased — the skin becoming cracked and irritated, and finally the whole body became anasarcous. There was no albumen in his urine. He was slightly delirious the night before his death which took place on the 14th of January, 1876.

Autopsy—thirty-six hours after death :—

The whole surface was pale. The legs were swollen, and the abdomen distended with effused serum. A few small ecchymoses were found on the backs of the hands. *Rigor mortis* slight. In making the *sectio-cadaveris* the muscles were seen to be pale in colour, and no trace of adiposé tissue could be found. The cartilages of the ribs were yellowish and fatty in appearance. About two gallons of dark greenish fluid was removed from the abdomen. Old adhesions united the right lung to the pleura, but otherwise this and the left lung were healthy. White patches and lines along the prominent veins marked the areas of attrition between the most prominent parts of the heart and pericardium. The heart itself showed no peculiarity, but on severing the large vessels coagula slipped out composed in distinct parts, of dark red clots, greenish-yellow, semi-purulent masses and smaller pieces of translucent fibrin. The right side of the heart was full of these, and they extended up into the pulmonary artery and its larger divisons.

The omentum, and peritoneum generally were found thickened, firm and sodden. The omentum had become attached in many points to the surrounding organs. Especially noticeable were two thickened bands, carrying large veins, that were attached to the abdominal walls at the edge of the ribs in front. The parietal attachment of the right band corresponded with the position of the fringe of vessels seen on the cutaneous surface and referred to already. In the thickened wall of the intestine the peritoneum in many places presented small depressions, about the size of a half

a grain of pepper, that looked like cicatrices, but no corresponding mark could be found on the mucous surface.

The greatly enlarged spleen, firm and mottled all over with whitish spots, occupied a large part of the left side of the abdominal cavity. It was tolerably regular in form, elongated like an almond, and presented the usual notch in its anterior edge, together with several smaller sinuosities towards its lower ends. It measured about 13 inches in length, 6½ inches in breadth, 17 inches in circumference horizontally at the middle of the periphery, and weighed — lbs — oz. The veins and splenic artery were proportionally increased in calibre. Dr. Osler has kindly examined the minute structure of the spleen as well as that of the other organs and tissues, and I believe has prepared a paper and microscopic sections, embodying and illustrating his observations.

The liver was considerably enlarged, and its cut surface was glistening and smooth, and of a greyer colour than normal. There was no means of weighing it. The kidneys were about normal, &c., in size and appearance, with the exception of being flattened out from pressure, the left one in particular being very much expanded. Some parts of the cortical substance were paler than others.

Some of the mesenteric glands were a little enlarged. Several of the retro-peritoneal glands were also increased in size and slipped readily from their investing tissues. They seemed to have a white watery appearance and be more friable than usual. The brain was not examined.

1, Beaver Hall Terrace,
Jan. 26th, 1876.

Remarks on the Histology of the above case. By WILLIAM OSLER, M.D., L.R.C.P., London. Professor of Institutes of Medicine, McGill University.

Beginning the description with the blood—the tissue most remarkably altered in this disease—it may be noticed in the first place, even with the unaided vision, a peculiar creamy

look in the slides prepared for examination. This is very characteristic, and when seen in blood taken from an adult is in itself evidence of an excess of colourless elements. In sucklings the same appearance is seen after feeding from excess of fatty matter in the blood. In a specimen sent me for examination some time before the death of the individual the colourless corpuscles numbered at least one-third of those in the slide; the majority of them in appearance resembled the ordinary colourless elements, many, however, were smaller, others a little more granular than usual. One feature, not at all usual in ordinary corpuscles, was the presence in most of a single, clear, vesicular nucleus. Blood taken from the heart and splenic vein after death presented very much the same characteristics; the colourless corpuscles from the latter situation varying greatly in size. The general experience in Leukæmia is that the colourless elements of the blood are somewhat larger than in health. No such conclusion can be drawn from this case as was evident by an examination and comparison of sketches of two sets of healthy and leukæmic corpuscles, drawn to scale. Though some of the latter were larger than normal, others again were much smaller, and the average size in the two sets was very nearly the same. Apart from the increase in number, the presence of a single vesicular nucleus in most of the corpuscles was their most striking feature, and one not common in either leukæmic or healthy blood. When first examined a nucleus may not be seen in normal corpuscles, but after a time, especially if re-agents—acetic acid—be added, two or three may develop, and the same number is spoken of as occurring in the colourless corpuscles of leukæmic blood.

Peculiar crystalline bodies, which will be referred to hereafter, were found in the blood of the specimen first given me, and also in the blood from the splenic vein and heart.

An unusual tendency to crystallize, not often met with in human blood, existed, and from the specimen examined during the life of the patient the Hæmoglobin separated

out in small square tablets and in long rectangular prisms. In a slide of blood from the heart, which was surrounded with oil and laid aside for a week, some enormous tablets and prisms crystallized out.

In the heart were several large clots of a peculiar greenish-yellow colour, like masses of semi-solidified pus. Some of these were seated on dark grumous bases, others were uniform throughout, while one was capped with a layer of transparent gelatinous fibrin infiltrated with serum. On examination the greenish coagula proved to be collections of leucocytes entangled in the meshes of the coagulated fibrin; while, after hardening, the cut sections presented a remarkable similarity to lymphoid or adenoid tissue, consisting of a reticulated network, in the interspaces of which the cells were enclosed. One or two decolourized clots were met with in the splenic vein.

SPLEEN—Teased portions showed numerous small corpuscles, very like those met with in the pulp of healthy organs, together with other larger cells, leucocytes, in tolerable abundance. Nucleated fibre cells existed in great numbers, constituting in many specimens the majority of the formed elements. Normally these occur about the smaller vessels and in the connective-tissue framework of the organ, but not in the proportion found in this case. Red blood corpuscles and much fibrous tissue were also present. No traces of the Malpighian corpuscles remained. Sections taken from different localities demonstrate that the chief change in the organ had occurred in fibrous, elements which were everywhere enormously hypertrophied, being both relatively and absolutely increased. Thin sections of a healthy organ, (such as you see under one of the microscopes,) show little else than a dense aggregation of small round spleen corpuscles, and it is only at the thinnest portions, and with high powers, that the delicate fibrous stroma of the pulp can be detected. In this case exactly the reverse holds good. Not only the coarse bands which, as in the normal organ, dip into the substance

are hypertrophied, but also the excessively fine adenoid network forming the matrix of the pulp ; so that with a low power we see a tissue composed apparently of nothing but fibres crossing each other in all directions, and having little, if any, resemblance to the structure of the healthy organ. From the remarkably irregular course of the fibres and their arrangement, a peculiar appearance is given to the sections which will be best understood by an examination of the specimens. Light and dark columns of fibrous tissue are seen crossing each other in every direction, four or five often radiating from one point, corresponding generally to a transversely cut splenic vessel. Thin sections highly magnified further show the extent of development of the fibrous tissue, and the relation of the cells to the reticular network, explaining, moreover, the light and dark areas which give such an extraordinary appearance to the specimens when examined under a low power. Extending from the larger trabeculæ coarse and fine fibres proceed which uniting enclose rounded or irregular-shaped areas, and from these others originate forming similar spaces. The nodal point of these fibres is usually somewhat triangular in shape, and a small nucleus is not unfrequently seen, so that in places they are or appear to be formed by the union of the processes of stellate fibre cells. Such an arrangement, I may remind you, constitutes the stroma or fibrous matrix of all lymphatic structures, and is known as an adenoid tissue. Normally it occurs also in the spleen pulp, enclosing the cells in an exceedingly delicate reticular network very difficult to make out. In this case the delicate stroma is greatly hypertrophied, and constitutes with the coarse bands dipping in from the capsule the bulk of the organ. The relation which the cells bear to the stroma is very easily made out, the latter simply encloses them in its meshes, and according to the width of these one,two, or more cells are included. In most instances the meshes are so small that only a single corpuscle is enclosed, which appears, moreover, closely embraced by the fibrous net. In other instances two or more corpuscles may be counted in a single areola.

The dark and light columns referred to above are found to depend on the presence or absence of corpuscles in the meshes; in the former case they are retained, hence the darker appearance; in the latter they are absent, and in consequence these columns look much lighter. A precisely similar structure is met with in the lymphatic glands, in which the light areas constitute the lymph paths, while the dark columns, termed the follicular cords, are filled with the lymph cells imbedded in an adenoid matrix. The lymphatic vessels after penetrating the glands ultimately open into the lymph paths, or clear columns, and the lymph in passing through disengages or washes away the corpucles from the contiguous follicular cords or dark columns.

Substituting in the spleen the blood-vessels for lymphatics, there is a remarkable similarity—not only in general structure, but in the relation of the blood current to the cells and fibrous network—between this organ and an ordinary lymphatic gland; so much so that Frey, Müller, and others describe it as a blood-lymph gland. According to their description the "blood from the arterial capillaries is emptied into a system of intermediate passages, which are directly bounded by the cells and fibres of the network of the pulp, from which the smallest venous radicles take their origin." The colourless corpuscles are supposed to develop from the cells of the pulp, and are washed out by the constant current of blood passing through the organ. Hence the increased number of these elements met with in the blood of the splenic vein. Some even believe that these colourless elements may while still within the spleen pulp develop into coloured corpuscles, but of such a process we have no definite knowledge. This being the case, it would appear easy to explain the etiology of this disease: hypertrophy of the organ, increase of the cellular elements, more rapid formation of colourless corpuscles, and conduction of these into the circulation by the blood current would be steps in the process. Unfortunately, there are insupera-

ble difficulties in the way of any such explanation. We know of half-a-dozen hypertrophies of the spleen—more genuine hypertrophies too than are met with in Leukæmia —in which the normal proportion between the elements is maintained, yet wholly unaccompanied by any increase in the cellular elements of the blood. To say that in the simple hypertrophies there is retention of formed elements, while in Leukæmia there is a rapid increase, and as rapid separation of colourless elements, incapable of developing into red blood corpuscles, is simply to admit our ignorance of the intimate pathology of this obscure affection.

Again, there is a disease Anæmia lymphatica, or Hodgkin's Disease, characterized by enlargement of the lymphatic glands of the body, generally without any accompanying hypertrophy of the spleen, and without any increase in the colourless elements of the blood; and yet this is equally pernicious and runs a like fatal course. Further, there is a variety of Leukæmia, excessively rare indeed, marked by hypertrophy of the lymphatic glands all over the body without corresponding enlargement of the spleen. I mention these affections, so like in some respects, so unlike in others, just to illustrate the difficulties in the way of establishing a correct pathology of lymphatic disorders.

Passing to the consideration of the liver we meet with changes equally remarkable. On section of the organ, and also through the capsule, irregularly scattered areas of a white or yellowish white appearance were seen, nowhere, distinctly isolated, but merging into the surrounded liver substance. Portions taken from these areas and teased in saline solution presented a great accumulation of round colourless corpuscles, ordinary lencocytes, very similar to those met with in the blood, many of them with the same clear vesicular nuclei. They presented considerable variations in size. The proportion of these corpuscles differed according to the locality from which the peice was taken; from the central portions of some of the larger

white patches they formed almost the only elements in the field, in others the liver cells were present in abundance mingled with the former. Irregular cells filled with yellow granules constituted the sole remains of liver structure in some places, while in others the cells were not so much degenerated, but a little irregular from pressure. Many possessed double nuclei. Some irregular shaped connective tissue corpuscles were found in these specimens. In the more natural looking liver areas the cells were found in a healthy condition, not at all fatty, and with very little granular matter. In these portions leucocytes were also found but in greatly diminished numbers.

Cut sections (made after hardening the organ in Müller's fluid and alcohol) are exceedingly instructive with regard to the distribution of the leucocytes. Thin sections of healthy uninjected liver, when cut transversely to the central veins of the lobules, show elongated cords or columns of hepatic cells converging towards the openings of the central veins, with very little intervening space between contiguous columns. Similarly in a section parallel to the central vein these columns appear cut across and are seen to unite with neighbouring columns, small empty spaces representing the position occupied by the vessels, existing between them. In this leukæmic liver an extensive infiltration of leucocytes existed between the columns of liver cells, and formed the essence of the disease in the organ. In some situations they were few in number and the surrounding liver substance was little effected, in others wide areas filled with them were seen between thin atrophied cords of hepatic cells. A still further change was seen in many places ; atrophied remnants of liver cells occurred interspersed in a tissue made up of leucocytes, surrounded by a finely granular or fibrillar matrix. Indeed, so closely were the leucocytes set together, and so scanty the remnants of liver substance, that in spots it looked like a tissue infiltrated by a malignant growth—a small cell Sarcoma. Of all organs the liver is the most frequently

affected by leukæmic growths, and occasionally is found much more diseased than the spleen. The leucocytes filling the spaces between the columns of liver cells are usually regarded as white corpuscles which have wandered from the blood-vessels, and certainly the conditions in the liver are most favorable to such a process. The blood in the portal veins has already traversed one set of capillaries and must circulate in the intralobular plexus under extremely low pressure. We know that the colourless elements of the blood have a great tendency to adhere to the sides of the vessels, especially under diminished blood pressure, and very readily migrate through. They are sticky adhesive bodies when in the vessels, and adhere to one another and to the walls with great pertinacity. That all the leucocytes in such a liver are to be regarded as vagrant white corpuscles may be doubted. It is much more probable that by a process of fission they have multiplied enormously in the leukamic tracts, causing atrophy of the liver substance. Indeed, these aggregations of leucocytes may themselves have been foci for the origin and development of others, which, passing into the blood current, served to augment the colourless elements.

KIDNEYS.—The portions of these organs removed for examination did not show any marked alteration in structure. Here and there groups of leucocytes were seen between the tubules, but the process was limited, and no extensive growths, as often met with, were found.

LYMPHATIC GLANDS.—These did not appear much, if at all, enlarged, and those removed (mesenteric and lumbar) did not give evidence of any hyperplasia of their cell-contents. The one which, so far, I have specially examined showed a great increase in the fibrous elements with a corresponding diminution in the cells.

Some remarkable crystalline bodies were found in the blood and liver, forming colourless spindle-shaped prisms, of very beautiful and regular shape, varying much in size. I can offer no explanation of their nature, not having had

time to test them properly. Many crystalline organic principles—Xanthin, Hypo-xanthin, Creatinin, and others—have been found in the blood and organs in this disease, but whether the ones here referred to have any connection with either of these I cannot say.

Case of Imperforate Rectum, Colotomy in the region of the Sigmoid Flexure—Recovery. By WILLIAM GARDNER, Professor of Medical Jurisprudence, McGill University.

On the 1st February of this year I was asked to see a male child, two weeks old, whose bowels I was informed had never been moved. On enquiry I found that the child had had several attacks of vomiting (on one occasion only, of stercoraceous character), but had not seemed to suffer much in other respects, and nursed fairly well. The skin was of a somewhat sallow or dirty hue and withered or shrivelled in appearance, the abdomen very much distended, and the superficial veins greatly enlarged, and distinctly visible through the integument. On examination the anus with sphincter and rectum to the extent of three quarters of an inch were found to be perfectly normal. To the examining finger the cul de sac felt puckered as if from a cicatrix; when the child strained, which the presence of the finger in the rectum seemed to induce it to do, a boggy semi-fluctuating sensation is perceptible.

Being by no means certain that a portion of the rectum was not absent, I did not dare to attempt to establish the natural passage, but concluded that the safer plan would be to open the bowel in the left groin, leaving the question as to the propriety of any attempts in that direction to be decided by the additional light which I expected would be thrown on the case by exploration from the artificial opening in the groin.

Consequently, on the following day and with the valuable assistance of my friend, Dr. Wilkins, I proceeded to perform the operation of colotomy, in or as near as might

be, the sigmoid flexure. The child having been chloroformed, I made an incision an inch and a half in length, extending in an oblique direction upwards and outwards from the middle line to a point about half an inch beyond the anterior superior spinous process of the ilium, dividing the skin, and cellular tissue or superficial fasciæ till I reached the muscles, which with the transversalis fascia, and peritoneum were successively divided on the director. The distended bowel lay immediately beneath ready to hand. The gut was transfixed by two curved parallel needles, half an inch apart, and each threaded with double ligatures of carbolized catgut, after which it was opened and the edges attached to those of the wound in the integument. A large quantity of meconium of a greyish-yellow colour was immediately voided. The substance of the coats of the bowel was found to be very easily lacerated as if softened, from the effects perhaps of previous inflammation from the distension. The operation, although tedious, was one which presented no very great difficulties in its performance. Some bleeding from the lower extremity of the wound was arrested without much difficulty. At no time after the operation had the child a single bad symptom but nursed and slept as if nothing had happened. The skin rapidly lost the dirty sallow hue it previously presented, and at the end of a fortnight the little fellow became quite plump and healthy-looking.

Repeated explorations of the bowel, first with elastic bougies, and subsequently with a whalebone probe, introduced through the opening in the groin, conjoined with the finger in the canal *cul de sac*, lead to the conclusion that the rectum is absent for a portion of its length, as the probe thus used cannot be made to pass downward for more than about three quarters of an inch, and cannot be felt by the finger. The most remarkable fact in the case, perhaps the only one excepting of course the success of an operation so frequently fatal, is that this child should have lived for a fortnight (as it did) previous to the operation, in a condition of compara-

tive comfort without evacuation of the bowels. Some difficulty has arisen from a strong tendency displayed by the opening in the groin to contract and to become almost closed. On one occasion on visiting the child, after an interval of ten days, I found the opening so much reduced in size as barely to admit an ordinary probe; the abdomen was again distended, and the child restless and fretful. With the assistance of Dr. Wilkins, who gave chloroform, I proceeded to dilate the opening, first by gum elastic bougies, andsubsequently with a bivalve ear speculum provided with screw mechanism for separating the blades. I subsequently introduced a pair of dressing forceps into the opening and further dilated it by separating the blades. The child almost immediately passed a large quantity of fæcal matter, and rapidly resumed his wonted good-nature. I hope to be able to obviate this persistent tendency to the closure of the opening by means of a plug and shield of gutta-percha moulded to the parts.

525 St. Joseph St.

TRANSLATION.

Anomalies in the development of Vaccine Pustules.

Heller (Centralblatt f. d. Med. Wissen) records some interesting observations on this subject, in the revaccination of 700 young and active recruits. They may not prove uninteresting to the readers of this Journal at the present time when the question of the protective influence of vaccine is so engaging public attention.

1. *Single vaccination, unequal (as regards time) development of the pustules.* Four cases, of which the following is the best example, Heinzer, vaccinated on 13th November, with nine days old glycerine lymph from a child (1.5) six points. On 20th November, three well developed pustules; on 28th November (15 days after), five well developed pustules, of which two had arisen within five days, the three old ones were beginning to dry up.

2—*First vaccination without effect, second effective with*

simultaneous development of pustules on the first points. Three cases. Rouby, vaccinated on 15th November with ten days old glycerine lymph, six points upon the right arm. On 20th November no trace of pustulation; vaccination repeated, six points on left arm. On 26th November two well developed pustules, of which one was on the last, the other on the first place of vaccination.

3.—*First effect incomplete, vaccination repeated, and now in both places development of mature pustules.* Three cases. Krûger, vaccinated on the right arm, six points, on 14th November. On 20th November, three indistinct pustules. Vaccination repeated on the left arm. On 26th November, four well developed pustules on the left arm and five on the right. Hiller concludes that failure or imperfect success of a single revaccination does not warrant the supposition that the individual is insusceptible to vaccination. He states as a remarkable fact that lymph which in forty persons proved effective, in ten others, vaccinated with equal care, was inoperative, whereas eight days later vaccination of these ten with another specimen of lymph was successful.

4.—*First vaccination successful, second, performed 5-7 days after, also successful.* The views of authors differ as to how many pustules are necessary in order to secure the desired protection. According to Eulenberg's collected experiences the question may be answered thus: *a few pustules may thoroughly fulfill the purpose, but the duration of the protection decreases as the number of pustules (under five) diminishes.* This corresponds with the idea, tolerably wide spread in the army, that less than three marks does not afford adequate protection, and consequently revaccination is indicated. In 27 cases in which within the first week after vaccination, 1–3 typical pustules had developed. Dr. Hiller repeated the vaccination upon the other arm, in ten on the 5th day, in seventeen on the 6th. Out of these twenty-seven recruits a second succsssful vaccination was

obtained in fourteen, six having four pustules and over, eight less than four. By way of comparison in twelve other individuals who had been successfully vaccinated, the process was repeated on the 15th and 16th days after, at a time when, of course, the first produced pustules had already dried. In not a single instance in these cases was the second attempt successful. These observations confirm those of Bryce in 1802, who states that even after the 6th day a repetition of the vaccination would produce fresh pustules. Sacco has shown by accurate experiments that the protective power of vaccination first supervenes between the 11th and 13th days, an experience fully borne out by clinical observations, as small-pox may come on during or immediately after a successful vaccination.

5.—*Development of pustules close to the vaccination spots.* Three cases. Westerfield, vaccinated on 13th November, with nine days old glycerine lymph on right arm, 6 points. On the 28th November, 7 well developed pustules, one of which was situated on the inner side of the arm, about 1½ inches distant from the nearest pustules. In these cases the transference of the virus was probably effected by means of the finger nails. Two of them confessed to having scratched the spots in the night on account of the intolerable itching.

6.—*Successful vaccination upon Acne and Psoriasis spots.* John, vaccinated with ten days old glycerine lymph on right arm, six points. On 20th November no effect visible. Vaccination repeated with lymph from the arm of an infant; four points on the left arm, and four points in Acne pustules, which were abundant on the shoulders and back. On the 26th November two mature pustules in acne spots on the shoulder. No change in the points on the arm. In another case vaccination at several points on Psoriasis spots developed into circumscribed papules with vesicular tops, while vaccination on the sound skin was twice unsuccessful.

7.—*Successful vaccination in the initial stage of Typhoid fever.* Dr. L. vaccinated on 24th April, eight points on right arm. Three days after he complained of headache, weakness, and shiverings, which proved to be only the initial symptoms of an attack of Typhoid fever with which he was laid up for between four and five weeks. By the 5th May four of the vaccination points had developed into mature pustules. W. O.

WERHNER; *Enormous Air-Tumour*, arising from spontaneous Dehiscence of the Mastoid cells. Cure after four years duration. (Deutsch, Zeitschr, f. Chir. III., quoted in Centralblatt f. d. Med. Wissen.)

Case.—After a violent fit of sneezing, four years ago, a tumour about the size of a pigeon's egg formed without pain over the right mastoid process of a weaver aged twenty years. Pressure caused the tumour momentarily to disappear, but it returned immediately with expiration. After it had grown to the size of the fist it could only be diminished by pressure, but no more entirely removed. On examination the tumour was found to extend over the whole right half of the head, it was flat with a broad base, the upper surface uneven and rough, and divided into three large rounded knobs, the most prominent of which lay over the back of the head and a less prominent one covered the crown. The skin over the tumour was separated, from the bone by a distance of 1½"–2"; otherwise the skin was normal. The tumour was entirely painless on pressure which drove the contents to all sides. The mastoid process perceptibly divided its whole length. Percussion clear in every part. On putting the ear down to the tumour and compressing it, we hear a bellows murmur (Blasenbalgeräusch), but no emphysematous crepitation; swelling and tenseness of the tumour increased by sneezing and the "Valsalva method." Slow and scarcely perceptible compression of the tumour causes the patient to feel a sensation of air in the throat, which is discharged with repeated difficulty of respiration. *No visible change in the ear.* Acuteness of hearing somewhat diminished on the affected side, relieved by a compress and bandage, this is without lasting effect. Closer examination confirmed what is above stated. During the pressing back of the air there are frequent eructations of gas but no difficulty of respiration. On the 12th day, compression after the previous removal of air by an exploring needle had no result. After this by the production

of adhesive inflammation, the opening of communication was endeavored to be closed. A ring was placed on the division in the mastoid process, and pressure made on it by the finger, whereby a portion of the tumour was isolated completely, and into this isolated portion, Iodine was injected. The three first injections only caused lessening of the tumour. The last injection was made into the highest part of the tumour directly over the crown and caused complete cure of that part of the tumour which still contained air and was supported by compress and bandages.

E. GUIBOUT, *Malignant Galloping Syphilis.* (Union Med., 1875, quoted in Centralblatt f. de Med. Wissen.)

Guibout describes two cases of Syphilitic Rupia which were accompanied with general cachexia. The patients had high fever with sleeplessness and were confined to bed. Both cases (a man and a girl, aged from 25 to 30), had four weeks previously primary sores. Malignant syphilis may be either a primary or a secondary affection. The first case had genuine symptons of general syphilis without any antecedent eruption. In the second case it appeared suddenly as distinct general disturbance after the various normal eruptions. In both cases the causes were, absence of treatment, bad hygienic conditions and impairment of the general health through excess, want and fatigue.

In the foregoing cases, we may accept the above reasons for the girl who, besides having the first appearances of syphilis, had had a phagedenic chancre. The young man had been previously very robust, and had been treated *lege artis.* In this case there must be supposed to be either a special idiosyncrasy or that an abnormal quantity (?) of the syphilitic virus had been received.

The diagnosis in all cases is a serious matter, itself a 'quoad vitam.' The treatment must be a very cautious

one, mercury and iodine being contra-indicated on account of the general weakness and fever. First of all fresh air, aromatic baths, oysters, wine, meats, &c., are indicated, also strychnine before meals. As soon as the strength is increased and the fever diminished, give five deci-grammes of Potass Iod, at first once a day, then twice, then three times; then use mercury by inunction and sulphur baths, or Hydrarg Iod. gr. 1-20 once a day. Both cases were cured in two months by this treatment. F. S.

Hospital Reports.

MEDICAL AND SURGICAL CASES OCCURRING IN THE PRACTICE OF THE MONTREAL GENERAL HOSPITAL

Case of severe injury to fore-arm. Under care of DR. ROSS. Reported by J. D. CLINE, Assistant House Surgeon, Montreal General Hospital.

John Ashcroft, a printer's boy, was admitted into hospital on the 24th of November, 1875. He was engaged in keeping the large stone of a lithographic machine clean with a large sponge when the sponge was caught in the roller and dragged his right arm in with it. The injuries were as follows: There was a compound dislocation forward of the lower end of the radius, the wound being transversely across the front of the joint down to the tendons; a compound dislocation between the two phalanges of the thumb, the end of the lower phalanx protruding through the wound, and a simple fracture of the ulna about three inches below the olecranon. The ends of the middle and ring fingers were very much crushed, and the whole hand badly bruised. The circulation was good in the hand. The vessels at the wrist had escaped. On admission the ends of the crushed fingers were amputated up to the first joints, and the dislocations reduced. All the wounds were sewed up, and the arm was put up on a rectangular splint on its posterior aspect with a straight anterior splint to within a couple

of inches of the wound at the wrist; and a gutta percha splint was moulded to the back of the wrist and bound so as to bring together the edges of the gaping wound at the wrist.

Ice water was applied to the whole wrist and hand by irrigation. The boy was tall for his age, of a thin skin and fair transparent complexion, and evidently of a constitution very much disposed to inflammation. The constitutional disturbance was very great. The temperature was 101°. the morning after the accident, and on the next morning, 104°. He got a mixture of Potass. Nit., and Tr. Aconit.

Dec 3rd.—Temperature down to 99°. Flaps of amputated fingers sloughed, and a large slough formed over seat of dislocation in thumb. Splint removed for first time. Found several superficial sloughs on back of hand, and abscess at back of wrist-joint, which was opened, and discharged a quantity of pus. It extended between the bones and into the joint. Was put upon Tr. Fer. Muriat m v, three times a day. General condition very good, so far, but from state of wrist-joint the advisability of amputation of arm was entertained.

Dec. 6th.—Consultation of the hospital medical staff being held, it was decided not to amputate but to trust to nature for a successful issue. He continued in good condition, temperature not running higher than 100°, till the 14th when a sharp attack of erysipelas set in. At 3.30 p.m. he had a severe rigor, during which his temperature was 103.5°. At 5.30 p.m., temperature was 106°, and pulse 144. He got a mixture containing Tr. Fer. Mur. m x, and Tr. Aconit m iij to the dose, which was to be taken every three hours, and a lotion of lead and opium was applied hot to the hand and arm. Up to this time the dressing had been carbolic lotion, 1 to 40. The hand became very much swollen; the granulations became glazed and swollen, and the discharge ceased from the sores, and altogether the arm presented a very unpromising appearance. On the 24th the erysipelas had subsided, the temperature was again

below 100°, and from this time the sores began to assume a healthy appearance. The second phalanges of the middle and ring fingers, which were quite loose, were now removed, the sores were dressed with 'red wash,' and the fingers strapped to reduce the swelling by pressure. The patient's general condition rapidly improved now, he was got out of bed, and the sores healed rapidly. At this time passive motion of the wrist, fingers and thumb was employed. It resulted, however, in very slight power of motion in the wrist and fingers, but very good in the thumb. He was discharged on the 7th February, 1876, with instructions to continue the passive motion. The result was certainly better than if an amputation had been performed. His hand at the time of his discharge was still swollen a good deal. He had very little power of flexion of the hand and fingers, with only the first phalanx of two of them left, but very good power of flexion in the thumb.

Case of Acute Rheumatism treated by Salicylic Acid.—Under care of Dr. FENWICK. Reported by J. D. CLINE, B.A., M.D.

Elizabeth Duncan, æt 18, was admitted into the hospital on the 28th February, with what promised to be a very sharp attack of Articular Rheumatism. Her temperature was 104°. There was a profuse acid perspiration; tongue very much coated, and both shoulders and one ankle were swollen and very tender. She was seen by Dr. Fenwick on the 29th, when he ordered her Salicylic acid grs. ii, every three hours, in capsules. Her temperature fell and tongue began to clean, but the joints remained very tender. On the 2nd March Dr. Fenwick ordered grs. v, every two hours. By the 5th of March all pain and swelling had left the joints, and on the 8th the patient was ordered clothes and full diet. Thus the patient was five days under treatment, during which time she took in all 272 grains of Salicylic Acid. It produced no irritability of the stomach or bowels.

Reviews and Notices of Books.

Vision, its Optical Defects, and the Adaptation of Spectacles. By S. C. FENNER, M.D., Louisville, Ky. With 74 Illustrations on wood.

In this work the author, without making any pretensions to originality endeavours to give, "in a concise and popular yet comprehensive form, a *résumé* of our present knowledge of Physiological Optics, and of the defects of the eye as an optical instrument," and since the great works of Helmholtz and Donders embrace nearly all at present known in this direction, it follows of necessity that they have supplied him with most of the facts contained in its three hundred pages. The value of a treatise of this kind depends chiefly upon the good judgment exercised in the choice and arrangement of material.

In this respect we think that Dr. Fenner is to be congratulated for his success, not only in having selected just the kind of information required by the practical Ophthalmologist, but also in the arrangement of the subject. The attentive reader will first become acquainted with the physical properties and phenomena of light, and the laws which have been deduced from observation of these phenomena. When these are thoroughly comprehended he will be prepared to enter upon the more complex subject of Physiological Optics. This part of the work cannot fail to be very acceptable to every student of ophthalmology who does not happen to possess a thorough knowledge of the German language; for the "Physiologische Optik" of Helmholtz has not been translated into English, and the Sydenham Society's translation of Donders on the Anomalies of Refraction, and Accommodation being difficult to obtain, there are no recent publications in the English language capable of supplying the wants of those who are not satisfied with the meagre way in which this division of the

science of ophthalmology is discussed in the ordinary treatises on diseases of the eye. Here we have the pith of all the progress made in physiological optics up to the present time, dressed in an easy and familiar style, so that nothing more than an elementary knowledge of mathematics is required, to render the subject comprehensible. The errors of refraction and defects of accommodation are treated of in the third part of the work, and whilst avoiding unnecessary minutiæ, the author has fully made good his intention of giving a concise, thorough complete account of this interesting and important branch of Ophthalmics. We can heartily recommend an attentive perusal of this chapter to all medical men, with the assurance that it will be the means of avoiding many grievous errors in diagnosis, and of affording relief to the suffering of thousands who are tortured with the dread of impending blindness, when in reality nothing but simple mechanical appliances are necessary to render vision perfect. To make this statement carry conviction with it we cannot do better than quote *verbatim* some of Dr. Fenner's remarks on hypermetropia:

"Many ambitious young men, with a fondness for study and high aspirations for professional distinction, have had their hopes nipped in the bud by increasing difficulties of continued near vision in reading, writing &c., and although they found relief from positive glasses, have been advised by those in whom they confided, not to wear them, but rather to go the country and seek some occupation which calls for but little exercise of accommodation. There is scarcely a teacher in any of our schools who has not had one or more pupils who, after much study, particularly by artificial light, does not suffer from fatigue, with nervous and vascular irritation of the eyes, accompanied by headache, and whose annoying symptoms would subside if permitted to wear properly adjusted convex glasses; but, owing to want of knowledge on the part of their physician, they are doomed to a continuance of the sufferings and inconvenience of defective vision. The great frequency of such cases renders

it important that not only members of the medical profession, but educated persons, and particularly teachers, who can easily comprehend the subject of hypermetropia, should be, to some extent familiar with it, so that they may make due allowance for the complaints of their pupils, and, at the same time, by the proper diffusion of knowledge, overcome the prejudice so widely existing in the public mind against wearing convex glasses, even where their use is imperatively demanded in order to overcome some natural or acquired defect in the eyes."

Similar remarks will apply to asthenopia from any other remediable cause, particularly that which is caused by astigmatism.

The book, on the whole, gives evidence of having been carefully written, by a man who thoroughly understands his subject, and it is only seldom that criticism would be in place, perhaps nowhere more than in the remarks made on "myopia at a distance," in which the illustrative case shows nothing more than an ordinary case of myopia, as any emmetropic person possessing normal vision can prove by making himself myopic to the extent of an $\frac{1}{6}$, by placing a suitable convex lens before his eyes and trying the experiments mentioned. He will then find himself able to read Jæger No. 1, at 8″ to 16″ but barely able to make out Snellen xx, at three feet distance, although, notwithstanding the too great convexity of the lens, vision through a small opening in a piece of metal held in front of the same glass, = No. xx at 20 feet. In the appendix are found some simple rules for the choice of spectacles, for the benefit of spectacle dealers and their patrons, which it is hoped will be the means of avoiding mistakes commonly committed by those who have not given the subject of refraction special attention.

Periscopic Department.

SURGERY.

Extension of inflammation from the Epididymis to the Urethra.—By FURNEAUX JORDAN, F.R.C.S., Professor of Surgery at Queen's College; Surgeon to the Queen's Hospital, Birmingham; and Consulting Surgeon to the Women's West Bromwich Hospital.

Gentlemen,—I have had many opportunities of showing you cases of epididymitis following urethral disease. The disease is a common one, and its causes are many—almost too many to count. It would be easy to run over some half a hundred, and yet leave a few unmentioned. Urethral disease following and resulting from inflammation of the epididymis is, on the other hand, rare; it has few causes, and is not yet at all recognised.

I show you here a case of urethral discharge, which followed traumatic inflammation of the epididymis. This young man was in good general and genital health. He had never had gonorrhœa. His urethra, meatus, and prepuce were perfectly healthy when he came into the hospital. He received a violent kick on the left testis, and came in two days afterwards with some ecchymosis in the scrotum, and severe pain, tenderness, and swelling, which were clearly seated in the epididymis. On admission the cord was not thick, nor tender, nor painful. The day after admission, I myself found part of the cord greatly thickened—the thickened portion running up from the testis, and gradually subsiding just below the outer inguinal ring. The second day after admission, the swelling of the cord had passed into the canal, which was now full and tender. Two days later a urethral discharge, neither abundant nor scanty, and whiter than ordinary gonorrhœal fluid, made its appearance, and with it micturition became a little painful and a little more

frequent. This is the first case which I have been able to show you, and I have myself seen very few.

Recently I saw a case of epididymitis, also from injury, of much interest, and having a direct bearing on our subject. A gentleman, aged fifty, in fair health, came, in the dark, with his right testicle against a key in a door. Scrotal ecchymosis and considerable epididymitis followed. The cord became much enlarged, running like a rope up into the inguinal canal. Later, an abscess formed and broke at the front of the scrotum. Now, in this case, from first to last there was no urethral discharge. There was undoubtedly inflammation of the epididymis, and as undoubtedly the inflammation ran up the cord—probably to the urethra.

The question naturally suggests itself, albeit parenthetically: Why does inflammation of the mucous surface yield a muco-purulent discharge in one case and not in another? Why, in one case of inflammation of the bladder or bronchial tubes, is there abundant pus and mucus, and in another case little or none? I reply, We do not know. You frequently hear me use the expression, "We do not know." I think it better to say plainly we do not know than to cover our ignorance with sounding phrases. It may seem paradoxical to you, perhaps, but I often silently contemplate the benefits of a negative system of surgery—if we could get it: I mean a systematic review of what we do *not* know. The author would be a man of no ordinary courage; he ought to be a man of learning, experience, and judgment, equal to his courage.

The case I have just told you proves the conclusion I wish to bring before you—namely, that inflammation may run upwards from the epididymis—more forcibly, in one respect, than if a discharge had followed. You are aware that at the height of a consecutive epididymitis the urethral discharge often disappears, only to return a little later; but here it was clear we had no hypocrite trying to hide a clap, because there was at no time any clap to hide.

Touching the question of suppuration, I find with sur-

prise, that so careful an observer as Van Buren denies its occurrence in epididymitis. If there be an abscess, he infers that the body of the testis is inflamed. I believe that in this country surgeons are agreed that suppuration is not rare in the consecutive or other epididymitis of cahectic men.

Let me ask you now to look for a few moments at the causes of the inflammation of the epididymis and cord. Bear in mind that any inflammation of the prostratic urethra may extend along the cord to the epididymis. Now, an inflammation of the bladder of any kind, whatever its cause, under whatever circumstances it arises, may run forward to the prostatic urethra, and thence to the epididymis. Again, an inflammation of the anterior urethra of any kind however caused, arising under whatever circumstances, may run backwards to the prostatic urethra, and thence to the epididymis. Acute inflammation arising primarily in the epididymis has few causes: I can speak positively of one only,—injury. If the causes of primary epididymitis were more numerous, we should, I think, long ago have held urethral disease to be one of its results. Why injury sets up epididymitis mostly, and not orchitis, is no doubt for the same reason that inflammation of the cord and epididymitis so rarely reaches the testis—namely, that within the tunica albuginea there is no room for acute inflammation, for vascular changes, cell-proliferation, migration of cells, the general running riot of germinal matter, or other inflammatory phenomena.

If you accept the facts of the case before you and my reading of them, you will now and then be able to explain an otherwise obscure gleet. Moreover, you will not be compelled to affirm that in every case an epididymitis and a gleet together have necessarily a urethral, much less a sexual origin. The views before you may occasionally have (I speak from personal observation) important domestic or legal bearings.

The treatment I adopt here is that which I am in the

habit of adopting in inflammations; but which, seeing that it is exceptional, and strange to examining boards, I rarely take up your time in explaining. My creed is brief: I believe that the inflammatory process is much the same everywhere. I believe that the best remedies in one inflammation are the best in all. I believe that the best remedies are removal of cause (where it is removable), rest, adjacent and not too near counter-irritation, suitable pressure, elevation, and a few simpler matters. I therefore in each case try to find out the best way of using these remedies. In acute epididymitis I enjoin counter-irritation lightly over the scrotum, sharply in the groin and front of thigh; pressure, which begins as a delicate support, and goes on to actual compression; rest and elevation as far as they are practicable. The value of compression is well shown in the circumstance to which I drew your attention a moment ago—namely, the pressure upon the testis. If our bodies were mapped out into small areas, and each area were bounded by a firm capsule like the tunica albuginea, we should be free from the dangers of at least acute inflammation.—*Med. Times and Gazette.*

Extraction of a large foreign body from the Ear. By George P. Field, M.R.C.S., Aural Surgeon to St. Mary's Hospital.

M. Pratt, a little girl aged 6, came to the hospital with a black glass bead the size of a large pea in her left ear. She was sent on to see me by Mr. Lane. Previously, however, to her coming to the hospital, several attempts were made to extract the bead; but, unfortunately, the mischief was only increased, the bead having been pushed in still deeper, and firmly imbedded, the result of subsequent inflammation. I syringed gently, and postponed any further attempt at removal (as there was a good deal of inflammation) until my next hospital-day. She was, however, laid up with chicken-pox for two months; and, when she came again to the hospital (February 16th), all inflammatory signs had disap-

peared; but the bead could easily be distinguished with the speculum, deeply seated and firmly fixed. She was put under chloroform, and an attempt made to remove it by means of glue attached to a piece of stick. This failed altogether. She was, therefore, placed on her side, with the affected ear downwards, and the syringe used from below; and, after a little trouble, the bead dropped out. This is a case that one is likely to meet with every day. A great deal more harm than good is often done by the use of instruments; but by the following method no injury can be caused. Place the patient under chloroform, with the ear affected downwards, and syringe from below. Pull the auricle backwards and upwards (by this means the external auditory canal is made into a straight tube), and apply the nozzle of the syringe to the upper wall of the passage. The water is then gently forced behind the obstruction; the foreign body is loosened, and its own weight causes it to fall out of the ear. I have removed all kinds of substances in this way.

Practical remarks on Congenital Cataract. By GEORGE CRITCHETT, F.R.C.S., Senior Surgeon to the Royal London Ophthalmic Hospital; Ophthalmic Surgeon to the Middlesex Hospital; etc.

(Read before the Ophthalmic Section of the International Medical Congress in Brussels.)

I come now to the most important and interesting question connected with these cases, namely, that of treatment. It has been chiefly with a view of bringing certain questions to a definite issue, that I am induced to offer these observations to our meeting. We will now proceed to the consideration of certain alternatives which present themselves to the mind as measures to be adopted. We may first divide the cases into those which are brought before us at a comparatively early period, as between the ages of six and ten; and those which come to us at or after the age of puberty. In children we may adopt various alternatives.

First, we may defer operative proceedings until the patient is able to decide the matter for him or herself. Secondly, we may operate on one eye, either by making an artificial pupil, or by removing the lens, by means of absorption or linear extraction ; or we may operate on both eyes. The method of making the artificial pupil also admits some modifications. It will be evident, therefore, that the case is not quite so simple as it might appear at first glance, but requires and deserves some careful consideration.

We will take the different questions *seriatim*, though to some they may possibly seem superflous and unduly analytical ; since the practice of the great majority of oculists is to subject such cases to the process of absorption, or more frequently to linear extraction—at least such a proceeding comes from time to time before my notice. It is this practice which I think deserves to be carefully reconsidered, and in many cases, if not in all, materially modified.

We will now briefly consider the various alternatives that we have set forth. Firstly : Do we meet with cases in children in which we are justified in postponing any operative proceeding ? If the vision be sufficiently good to allow the ordinary education to be carried on, and a fair amount of active exercise to be taken, I should prefer not to perform the major operation of absorbing or removing the lens, as it involves some absolute risk, and, if it succeed, requires the constant use of cataract glasses, which are a positive hindrance to a child ; but if it be a case in which there is such a well-defined, clear, broad margin as revealed by the use of atropine, that we have good reason to believe that a small artificial pupil would materially improve vision, should advise it to be made, because it is an operation with a minimum amount of risk, and because glasses are not required. In the second place, supposing the condition of the young patient, as regards vision, is such as to require operation, what method shall we adopt ? In all cases in which there is a clear margin representing one-third of the circumference of the lens, and where the vision is consider-

ably improved by the use of atropine, I should strongly advise the performance of a small artificial pupil in preference to the removal of the lens. It has the advantage that it is far safer, is much more quickly and easily performed, that it enables the patient to dispense with the use of glasses, that it in no way enfeebles the eye, nor does it prevent a subsequent removal of the cataract if altered conditions should render this expedient. When the transparent margin is somewhat narrow, the effect will be more doubtful. Our best guide in such cases is carefully to test the sight uuder the full influence of atropine ; and, if there be decided improvement, it may be confidently predicted that an artificial pupil will place the eye under still more favourable optical conditions. It is sometines very difficult to arrive at definite results in young children, and delay may thus be justified.

Secondly : Supposing an artificial pupil to be determined upon, what method shall we follow? The best optical results will be obtained by the performance of an iridodesis. It uncovers just sufficient space in the transparent part of the lens, and, at the same time, partially covers the semi-opaque portion. I have never met with any of the mischievous effects from this operation which have been assigned to it by others ; but as I can obtain nearly as favourable an optical result by another method, I have recently in most instances adopted it. I proceed as follows. I introduce a broad double-edged needle through the cornea near its margin, and just at the point which I intend should form the limit of my pupil. After withdrawing the needle, I introduce my small blunt hook, draw out the small portion of iris that intervenes between the edge of the pupil and the puncture in the cornea, and cut it off close ; then if gentle pressure be made on the surface of the cornea with the spoon of the curette, the iris detaches itself from the corneal puncture, and floats in the chamber, having had little more than a slit made in it ; indeed, it appears as if a small oval peice had been punched out of its pupillary edge.

In seems to me that this operation is peculiarly well suited, to accomplish its purpose. It forms a small limited pupil just in the right place, where there is little or no reaction, and it is as safe as any operation on the eye can be.

We may consider in the next place, those cases where the transparent margin is too narrow to admit any material benefit from an artificial pupil, and yet where the vision is so far impaired as to give strong indications for an operation. Under these circumstances, we have no alternative but to remove the lens either by absorption or by linear extraction, a method of proceeding to which many high authorities are in the habit of having recourse in the majority of these cases, not unfrequently on both eyes simultaneously, and in such skilful hands, with a large average of success. Nevertheless, my own experience and my observation of others have convinced me that it is an operation involving some risk, and one that I undertake with some anxiety. Formerly the method of operating for congenital cataract was by absorption, a process requiring several months for its completion ; more recently this has been replaced, in some measure, by linear extraction, further modified by suction. Each of these methods presents certain advantages and certain risks. The method for gradual absorption is the most simple and easy of performance, and in the end gives, perhaps the best result. The pupil being fully dilated, the capsule is fairly opened with a fine needle introduced through the cornea, so as to expose the lens substance to the solvent action of the aqueous humour ; the pupil is kept dilated ; and, at the end of six weeks or two months, if the opening in the capsule have closed, the same process may be repeated ; and when all the lens matter is absorbed, the capsule, if any opaque part remain in the field of vision, must be torn through. Should all progress favorably, a clear, round, moveable pupil remains, offering the best result that art can secure. The risks of the operation are, firstly, a sudden swelling of the lens from too rapid absorption of the aqueous humour in

its substance, giving rise to severe pain and to considerable hardness of the globe, a condition which may be best designated as acute traumatic glaucoma. Unless this symptom be speedily relieved, by performing iridectomy and allowing some of the lens matter to escape the eye is in imminent danger of being sacrificed, and even under the most favorable circumstances, only a partial success will be obtained; or, again, portions of lens matter may accumulate in the anterior chamber, or there may be a sudden displacement of one or more fragments, which by pressing upon and irritating the iris, may give rise to pain and inflammation, and threaten the success of the operation. With a view to relieve this condition, an effort must be made to extract the offending fragments. These various *Contretemps* have led some oculists to adopt a different method of procedure : a plan known as linear extraction is substituted. It consists of two stages. In the first place, the cataract and its anterior capsule are freely broken up, and they are allowed a few days to become macerated and softened by the action of the aqueous humour. In the 2nd place, an opening is made in the cornea ; and then by means of a syringe suitably constructed, the soft matter is drawn or sucked out, so as, if possible, to remove every particle of the macerated lens. This operation has the advantage of rapidity, and in skilful hands often produces very excellent results ; but it is by no means free from risk, and seldom leaves the pupil round and free. On the whole, after having extensively tried both plans, and after having watched the results in the hands of others, I am disposed to revert to the old slow method, reserving linear extraction for those cases in which the fragments are setting up serious irritation, or for a few exceptional cases in which the saving of time may be a great object. as regards the treatment of the same group of cases in adults, similar methods must be adopted. At the same time it should be borne in mind that the operation of absorbing the cataract is beset with more risks than in children ; every possible care and precaution should, therefore, be taken.

In conclusion, I will state a few rules that I lay down for my own guidance in these cases, and that I venture to urge upon the attention of this meeting. In the first place, if the opacity be inconsiderable, and if the child be able to pursue his education, and compass the ordinary functions of life tolerably well, I do not urge operative interference, more especially where it would involve removal of the lens; but if a decided advantage could be obtained by making such an artificial pupil as I have described, it is so absolutely free from risk that I should advise it.

In the second place, I make it an invariable rule only to operate on one eye at a time, and for this I have more than one reason: the stake is too great to hazzard both eyes; then, a failure in one may assist us to pursue a safer, or, at any rate, a different method, if the patient or friends be willing to run the risk in the second eye; besides a failure of both eyes is such a fearful wreck— a catastrophe I have witnessed more than once, and hope never to see again. It has, moreover, occurred to me on three or four occasions in which I have operated with success upon one eye in intelligent adults, and have removed the cataract that, whilst they thankfully owned the great advantages gained by the operation, they have deliberately elected to retain the other eye in its defective state, affirming that it possessed certain qualities and advantages that were wanting in their renovated eye, and with which they were unwilling to part. As a final consideration, I may state that an eye from which the lens has been removed does not subsequently possess so good a life; it is more liable to undergo morbid changes and to perish after a lapse of years. Supported by these various considerations, I reiterate my opinion that there is a strong case in favour of operating on one eye only Of course, if one eye succeed, there can be no objection to the subsequent performance of an operation on the other, if the state of the vision render it expedient.

In the next place, I always perform the small iridectomy already described in preference to removing the lens where-

ever the extent of the transparent margin offers a fair prospect of improved vision, even though the result obtained be not quite equal to that which might accrue from the removal of the lens; it is so much safer, and it further has the advantage, especially with the young, that cataract glasses are not required. I look upon the substitution of an artificial pupil in the treatment of these cases as a valuable march in the progress of our science. I have patients on whom this operation was performed years ago who are engaged in active professional duties, both in the church and in the law.

Lastly, in those instances where removal of the lens is indicated. I especially insist on the importance of only operating on one eye; then I prefer the slow method by absorption; and I urge the necessity of keeping a constant watch over the case until its termination, as acute symptoms may supervene at any moment, requiring immediate and active interference. I select the slow plan because I consider it safer, because the results as regards rotundity and mobility of the pupil are usually more completed, and because rapidity should scarcely be allowed to weigh in the choice of the method.

In dealing with these anxious and very responsible cases, whatever plan of procedure we elect, and however great the skill and exprience we may bring to bear upon them, we shall inevitably meet with occasional failure. This should make us most generous in our judgment of those who encounter similar misfortunes; and, when such a sad result happens in our own practice, it is no little consolation to reflect that no element of rashness was permitted to sway our better judgment, but that every precaution has been taken which human skill and prudence could suggest.—*British Medical Journal.*

MEDICINE.

Delusions of the Insane. By J. G. THORNLY, M.D., Asst. Medical Officer Leicester County Asylum.

It is recorded by Esquirol that there was a female patient at Salpetriére who fancied that she had in her intestines

all the personages of the New Testament, and occasionally those of the whole Bible. When she died an examination revealed adhesions of the intestines to the peritoneum and to each other.

In this asylum there was a male patient who had been here for many years, and who for a considerable number of years past was in the habit of stating that there was a hundred-weight of iron in his abdomen ; he would occasionally put his hands to his abdomen, as if to support this weight of metal which he believed to be there, and it was impossible in any way to shake this rooted delusion. He was a strong and healthy man, and was in the habit of working daily on the farm as a labourer. This man suffered from melancholia, was often very reticent, and never communicative. Some time ago he was observed not to take his food so well as usual : he more frequently pressed his hands against his abdomen ; and when standing he leaned slightly forward ; but he never even once complained of pain or other uneasiness ; he was persuaded to go to bed. Afterwards the symptoms increased in severity : the abdomen became very tender on pressure, the appetite failed, the pulse became weak and thready. During the whole of his illness he was very silent and uncommunicative, so that no information could be obtained by asking him questions. He died a few days after taking to bed, and a post-mortem examination revealed a perforation of the intestine, near the junction of the ascending and tranverse colon, sufficiently large to admit the tip of the little finger. Through this opening some of the liquid fæces had passed into the peritoneal cavity. There were signs of inflammatory action in the neighbourhood of, and for some distance around, the aperture, but not to the extent which might have been expected.—*Medical Press and Circular.*

Nitrite of Amyl in Angina Pectoris and Heart disease.

Dr. Hamilton Osgood, of Philadelphia, in the *American Journal of Medical Sciences*, reports some cases treated by

nitrite of amyl. In one young woman he has used no other remedy than the nitrite of amyl, to the effect of which the patient is exceedingly sensitive, so that he only uses three-drop doses, and generally during the second inhalation the patient flings herself away from the handkerchief with a spasmodic shudder. By this time, however, she is invariably relieved. The effect of the remedy upon her is unusually profound. She remains in a semi-unconscious state from one to three minutes following the final inhalation. In another young lady who was attacked in church, he found her in a convulsive condition as to limbs and fingers, and unable to respond, being apparently unconscious to the sound of his voice. The right hand was occasionally clutched over her heart. There was a very small left radial pulse as compared with the right. He administered two drops, and with the first inhalation the patient, evidently startled, began to shriek wildly, in spite of which he continued the inhalation, and was rewarded by the return of her ability to speak. She felt relieved of pain, which had been "frightful." In another young lady five inhalations of one drop each relieved her not only of the paroxysm, but also of all traces of the pain to which she had for months been the victim. Heretofore unable to move quickly, to go up stairs, or drive without additional pain, she subsequently was and has ever since been able to take long walks, dance, run up stairs and ride on horseback without the slightest sensation of discomfort.

In these three patients the closest examination revealed no affection of the heart. But a case is given of organic disease which though fatal, shows the power of the remedy. (a female, aged fifty-seven years.) The patient, when seen by Dr. Osgood, was almost in a state of collapse; face livid; surface of the body bathed in perspiration; pulses small, especially the left radial. There was agonizing pain about the heart, extending to the occiput, left shoulder, and upper left arm; singultus, globus, great dyspnœa and difficulty of speech. The heart-sounds were weak, but normal.

The organ was acting irregularly. From five-drop doses the patient experienced immediate relief, and in the course of thirty minutes resumed an almost natural look, colour returning to the cheeks, breathing becoming much freer, and the ability to speak being restored. Attacks of lesser degree appeared during the next hour, which were not relieved by hypodermic injections of morphia and a variety of powerful stimulants. The patient was growing rapidly weaker from the effects of the first paroxysm. Unwilling to continue the use of nitrite of amyl, but nothing else giving the slightest relief, Dr. Osgood again administered it in smaller quantity. It quenched the pain and permitted the patient to assume a horizontal position. He then began to give her strong doses of brandy and aqua ammoniæ every quarter of an hour, but she gradually and quietly sank into a new collapse, which ended in death four hours after the first attack.

The autopsy revealed a heart well covered with fat; valves normal; slight atheroma of the aorta ascendens; right ventricle extremely thin and flabby: left ventricle in an apparently fair condition, but rather light in colour; papillary muscles shortened and thickened; liver markedly fatty. No other organs examined. The microscope showed that the muscular tissue of the heart was in a state of decided fatty degeneration. It is probable that this condition of the heart would be accused as the cause of the paroxysms by those who believe that angina pectoris *depends* upon a diseased state of the organ.—*The Doctor.*

MASSAGE AS A REMEDY IN SURGERY.

Massage or kneeding or champooing is regarded by Berghman as of the greatest benefit in joint affections. In traumatic inflammation of joints he states that it is superior to rest and antiphlogistics. When properly and continuonsly practised it promotes absorption and aids circulation. Out of 145 cases treated on this principle all were benefited and he observed that in those cases in which massage was practised early, a cure was rapidly effected.—*Nord. Med. Arkiv.*

CANADA

Medical and Surgical Journal.

MONTREAL, APRIL, 1876.

SANITARY STATISTICS.

In the Canadian House of Commons on the 20th, ultimo, Dr. Brouse, member for Grenville, moved for the appointment of a select Committee to enquire into the expediency of asking legislation with a view to constitute a Bureau of Sanitary Statistics in connection with one of the public departments at Ottawa. In the course of his remarks, Dr. Brouse made statements, some of which he will find are not borne out by facts. In speaking of Montreal, he stated that the mortality of our city was 38 per 1000, "but while admitting that the statistics were not perfect, he was prepared to think that it exceeded 40 per thousand." Leaving aside the annual reports of the death rate of our city, we will take the report of the Census for 1871, where it will be found that Montreal, with a population of 107,225, lost by death during the year 3.096. This yields a little over 28 per thousand of deaths. This we believe is much nearer the truth than the various sensational statements that have been made against the salubrity of our city, and which have apparently been adopted by Dr. Brouse without enquiry. We have on various occasions given this matter a careful investigation, and came to the conclusion years ago, that the city of Montreal had an annual death rate ranging from 32 to 36 per 1000, and that perhaps, outside of all extraneous assistance, the death rate of our city did not exceed 30 per 1000.

It must be stated that we in this city suffer from a plethora of charitable institutions. The citizens are wealthy

and liberal, and we see on all sides rising heavenward the minarets of good substantial Churches, Hospitals, Homes, and Poor Houses—what more natural than that these institutions should attract the sick and destitute of other parts of the country, a certain proportion of whom die and are buried in one or other of our cemeteries. The actual and positive death rate of the City of Montreal is not really attainable, from the defective character of our returns.

Again, Dr. Brouse assumes that out of a population of 4.000,000 in this Dominion, we annually lose by death 120,000 souls, or at an annual death rate of thirty per thousand. This is manifestly incorrect. While the death rate in cities is estimated to be large, the country districts lose comparatively few in proportion to their population.

On referring to the census of 1871 & 72, it will be observed that the entire population of the four provinces of Ontario, Quebec, New Brunswick and Nova Scotia was put down at 3,485.761, and of these there died in 1871, 47,314. We willingly admit that a very large proportion of these deaths was from preventable causes, but we will never arrive at any reliable information on this subject until the entire system of registration is changed. This appears to us, to be the manifest duty of the Federal Government and not of the Local Legislatures. It is not a subject with which the Local Legislatures have anything to do. It is not a municipal matter. If the Federal Government point out to the local authorities, that in certain localities they are losing by death a much larger proportion of their population, than under ordinary circumstances should die, it will then become the duty of the Local Legislatures to seek out the cause and apply the remedy. We have before alluded to the defective nature of our statistical returns of Births Marriages and Deaths. We are aware that in our Province of Quebec, the Roman Catholic Church will oppose secular registration, as that Church looks upon the registration of births as secondary to the ceremony of baptism, and that if it were alone necessary to enregister the births

the Church would lose much of its power over the consciences of its votaries, or at least that their would be some waverers who would comply with the law, but refuse to expose their new-born infants to the rigors of a Canadian winters-day. In the cause of the innocents we believe a general secular registration law would save many lives.

In the course of the debate Mr. Workman observed that the mortality was largely confined to children under three, or certainly under four years of age. Had he substituted weeks or months for years he would have been nearer the truth. On this head what do we learn from the Census. Let us compare the Protestant Province of Ontario with the Roman Catholic Province of Quebec. The entire death rate in Ontario during the year 1871 is put down at 18,063. This in a given population of 1,620,851, of these there died of children under one year 4,435. In the Province of Quebec there was a population of 1,191,516, the entire death rate in that Province was 20,873, and of these there died of children under one year of age 7,133. The custom of taking a new born infant within a few hours after its birth, to a church to be baptised is, to our mind, questionable morality, and without alleging this practice as the cause of this marked difference in infant mortality between these two sections of the country, it may in all justice be regarded as a cause of that marked difference; it calls to mind the very forcible language of Malthus in his article on population, in speaking of infant mortality, he remarks: "The frail tenure by which an infant holds its life will not allow of remitted attention, and the neglect of a child by its mother at the very time when of all others it stands most in need of her care is in the event equivalent to its destruction." Again, we might reasonably expect that the Provvince of Ontario, with its new settlements, and extended malarial districts would show markedly a higher proportion of deaths than the older settlements in Quebec. These are interesting questions which as sanitarians aad political economists, we should be capable of dealing with, but under

the present imperfect system of collecting and tabulating information on these topics it is quite out of our power.

We regret to observe that the feeling on the part of the Government was to shelve the question, but although it may be passed over or voted a bore by the Commons of Canada during the present session, it is a matter which will have to be taken up and gone into with a will some day or other. We think that the Honourable the Premier is laboring under a misconception as to the objects to be attained by Federal Legislation on this subject. The questions of house drainage or ventilation, the purity or otherwise of our water supply would form no part of the inquiry. These manifestly are matters for municipal governments to decide. But what is more especially required is a General Registration Act for the Dominion, in which we think might with advantage be included compulsory vaccination. We trust this subject will not be allowed to drop. Dr. Brouse appears to be in earnest, and he certainly deserves general thanks for moving in the matter, but it does appear that he has moved without any very definite scheme, without in fact knowing what was in reality required. Sanitary science is all very well but sanitary facts will be far more useful, and if the bureau of statistics can with a proper and rigid Registration Act draw year by year a comparison between the mortality of any two places throughout the Dominion of Canada much good will result, and we will then be in a position to seek out the causes of an increased death rate in any particular section of the country with a view to their removal.

ANNUAL CONVOCATION OF McGILL UNIVERSITY.

The Annual Convocation of McGill University was held in the William Molson Hall of the University, on Friday the 31st March 1876, for conferring degrees in Medicine and Surgery. There was a large assemblage of the friends of the University, the Hall being filled with ladies and gentlemen. Shortly after three o'clock, the members of convocation

passed through the hall and ascended the platform, and in the absence of the Chancellor of the University, Peter Redpath, Esq., took the chair.

The meeting was opened with prayer by the Venerable Archdeacon Leach, after which W. C. Baynes, Esq., B.A., Secretary, read the minutes of the last meeting of Convocation.

Professor Scott, M.D., in the absence of the Dean of the Faculty of Medicine, read the following report of that Faculty.

The total number of students enregistered in this Faculty during the past session was 148, of whom there were from :

Ontario	86	New Brunswick	3
Quebec	42	P. E. Island	5
Nova Scotia	4	West Indies	1
		United States	7

The following gentlemen, 21 in number, have passed their primary examinations on the following subjects : Anatomy and Physiology, Chemistry, Materia Medica and Pharmacy, Institutes of Medicine and Botany and Zoology, their names and residences are as follows :

NAME.	RESIDENCE.
Armstrong, George E.	Montreal, Q.
Bell James	North Gower, O.
Boyle Albert	Charlottetown, P. E. I.
Brodie John,	North Georgetown, Q.
Burland Samuel C.,	Cambridge, Mass., U.S.A.
Cannon Gilbert	Almonte, O.
Cameron Duncan H.	Perth, O.
Collison Robert.	Matilda, O.
Cotton Cederic L.	Cowansville, Q.
Faulkner Daniel W.	Hollaway, Ont.
Fortier Alexandre	River David, Q.
Fraser Alexander C.	Wallaceburgh, O.
Gillies John A. F.	Summerside, P. E. I.
Greaves Henry C.	Barbadoes, W. I.
Jamieson Alexander, B.A.,	Lancaster, O.
Lane John A.	Prescott, O.
Law William K.	Richibucto, N.B.
Miner Frank L.	Abercorn, Q.
Oakley William D	Plattsville, O.
Park George A.	St. Marthé, Q.
Smellie Thomas S.D., M.A.	Fergus, O.

The following gentlemen, 34 in number, have fulfilled all the requirements to entitle them to the degree of M.D., C.M., from this University. These exercises consist in examinations both written and oral on the following subjects: Principles and Practice of Surgery, Theory and Practice of Medicine, Obstetrics, and Diseases of Women and Children, Medical Jurisprudence and Hygiene,—and also Clinical Examinations in Medicine and Surgery conducted at the bedside in the Hospital.

The names of the successful candidates, their residences and the subjects of their theses, are as follows :—

NAME.	RESIDENCE.	THESIS.
Baynes Donald, M.A.	Montreal, Q.	Bronchocele.
Campbell James	London, O.	Spasmodic Asthma.
Clarke Fincastle G. B.,	Collingwood, O.	Bloodless Operations.
Colquhoun George	Grenville, O.	Clinical Reports.
Cook Guy R., B.A,	Aultsville, O.	Bronchitis.
Cooke William Henry	Drummondville, Q.	Food.
Coyle Henry W.	Berthier, Q.	Erysipelas.
Craig Thornton	Glengarry, O.	Erysipelas.
Cream Thomas N.	Quebec, Q.	Chloroform.
Crothers William	Clarenceville, Q.	Clinical Reports.
Eberle Henry A.	Morpeth, O.	Pneumonia.
Gray John S.	Heckton, O.	Uterine Hæmorrhage.
Greer Thos. A.	Colborne, O.	Spermatorrhœa.
Hunt Henry.	Notfield, O.	Clinical Notes.
Johnson James B	Weston, O.	Hospital Reports.
Lang Christopher McL.	Owen Sound, O.	Ankylosis.
Levi Reuben.	Montreal, Q.	Lobar Pneumonia.
McIlmoyl Henry A.	Iroquois, O.	Typhoid Fever.
MacDonnell Richard L., B.A.	Montreal, Q.	Medical Cases.
McRae George	Renfrew, O.	Typhoid Fever.
Metcalfe Henry J.	Riceville, O.	Diabetes Mellitus.
Munro Alexander,	Montreal, Q.	Tubercle
Murray Chas. H., B.A.	Montreal, Q.	Hospital Reports.
Powell Robert W.	Ottawa, O.	Surgical Cases.
Reddy Herbert L., B.A.	Montreal, Q.	Hospital Reports.
Ritchie Arthur F., B.A.	Montreal, Q.	Tubular Nephritis.
Robinson Stephen J.	Brantford, O.	Typhoid Fever.
Secord Levi.	Brantford, O.	Pulmonary Emphysema.
Smith William.	Lachute, Q.	Alcohol.
Snider Fred S.	Simcoe, O.	Acute Artic-Rheumatism.
Stevenson Charles N.	Sarnia, O.	Clinical Reports
Storrs Arthur.	Cornwallis, N.S.	Post Part. Hæmorrhage.
Stroud Charles S.	Montreal. Q.	Syphilis.
Young Philip R.	Clarenceville, Q.	Hospital Reports.

Of the abovenamed gentlemen Mr. R. W. Powell is under age, however, passed all the examinations and fulfilled all the requirements necessary for graduation, and only awaits his majority to receive his degree.

The following Gentlemen, 17 in number, passed their examination in Theoretical Chemistry:

A. S. Greenwood,	Milton McCrimmon,	George W. Kirk,
James J. Guerin,	H. H. Gardner,	N. Ayer.
J. D. Cameron,	W. B. Gibson,	D. F. Smith,
F. J. Stafford,	A. P. Chisholm,	J. K. McKinlay,
M. C. Rutherford,	Robert Bell.	M. Bicksted,
J. R. Fraser,	H. N. Vineburg.	

Students who have passed the examination in Botany and Zoology:

BOTANY.

CLASS I.

W. J. Neilson,	J. Smith,	W. H. Garnder,
W. D. Oakley,	W. F. Shaw,	H. C. Feader,
B. F. Butler.	J. B. Lawford,	S. A. McDonald,
D. F. Gurd,	A. W. Imrie,	A. Henderson,
M. C. Baker,	E. McNeil,	A. D. Webster,
J. S. Brown,	J. B. Carman,	
H. Stevenson,	P. E. Carman.	

CLASS II.

J. McCarroll,	F. Hana,	H. B. Burwash,
J. G. Scott,	W. Sutherland,	C. J. Jamieson,
S. McNee,	J. C. McRae,	J. H. Smiley.
T. A. Kidd,	F. H. Mewburn,	M. Seymeur,
F. McLennan,	J. M. Wilson,	M. Beckstead.

CLASS III.

W. K. Law,	T. A. Page,	J. A. Mattice,
C. D. Bancroft,	R. C. McDonald,	G. Tate,
J. S. Edwards,	G. W. Olivier,	A. Poops,
S. R. Herbert	C. A. Weagant,	M. Karmon,
B. Menzies,	G. C. McCulloch,	W. R. Hall,
E. W. Lettree	J. E. McEvenue,	W. F. Mullen,
W. J. Prendergast,	W. D. M. Bell.	

ZOOLOGY.

CLASS I.

A. Henderson. A. D. Webster.

The Medical Faculty Prizes are three in number :

1st. The Holmes Gold Medal, awarded to the graduate who receives the highest agregate number of marks for the best examinations, written and oral, in both Primary and Final branches as also for an inaugural thesis.

2nd. A prize in books awarded for the best examination, written and oral, in the final branches. The gold medallist is not permitted to compete for this prize.

3rd. A prize in books awarded for the best examination, written and oral, in the primary branches.

The Holmes Gold Medal was awarded to Robert W. Powell of Ottawa, O.

The prize for the final examination was awarded to Charles H. Murray, B.A., Montreal, Q.

Although there are but two regular prizes given to students of the graduating class, a special prize has been awarded by this faculty to Richard L. MacDonnell, B.A., for general proficiency, and especially the excellent character of his inaugural thesis.

The prize for the primary examination was awarded to Alexander C. Fraser, Wallaceburg, O.

The following gentlemen, arranged in the order of merit, deserve honourable mention :—In the final examination, Messrs. MacDonnell, Ritchie, Young, Hunt, Smith, Secord, and Lang.

In the primary examination Messrs. Bell, Cotton, Oakley, Smellie, Jamieson, Miner, and Armstrong.

PROFESSOR'S PRIZES.

PRACTICAL CHEMISTRY. - - - D. F. Smith.

BOTANY—Neilson & Oakley. ZOOLOGY—Henderson.

PRACTICAL ANATOMY.

Demonstrator's prize in the Senior Class, awarded to William Donald Oakley.

Those deserving honourable mention for care and assiduity, Messrs. Greenwood, Vineburg, D. F. Smith, Cameron McGuigan, and Fraser.

Junior Class prize awarded to Wm. J. Neilson. Honourable mention, Messrs. Webster and McCrimmon equal. Lawford, Heard, Shaw and Stevenson equal, McCully.

The graduates were then called forward and the *Sponsio Academica* was administered by Professor Craik, M.D., and each in turn presented to Vice Chancellor Dawson, who performed the ceremony of Capping, and delivered to each candidate his diploma of Doctor of Medicine and Master of Surgery.

At the conclusion of this ceremony Dr. A. F. Ritchie delivered a valedictory address on behalf of his associate Graduates. Dr. Roddick, Professor of Clinical Surgery, then addressed the graduating class on behalf of the Medical Faculty.

After the proeeedings of the Faculty of Law, and an address from Mr. Justice Torrance, the benediction was pronounced by the Rev. Dr. Wilkes, and the convocation adjourned.

Case of Sphacelus of the Thyroid Gland, Recovery of the Patient. By the late GEORGE G. GASGOYEN, F.R.C.S.

At a meeting of the Royal Medical and Churgical Society held February 8th, 1876 the particulars of a case was submitted of idiopathic inflammation of the neck, occurring in a healthy man aged 38 years which was followed by death of the thyroid body and extensive sloughing of the connective tissue of the part. The patient made a rapid recovery and had since suffered no discomfort of any kind from the absence of the gland. The great rarity of such cases was alluded to, various German practitioners had placed on record a few examples of a similar nature. Lebert in his work on "Diseases of the Thyroid gland" refers to several similar cases and gives the particulars of two in which the symptoms and course of the disease were almost identical with the case under discussion. Four of these cases recovered and although the destruction of the gland was complete they did not in any way experience inconvenience rom its loss. This would lead to the supposition that in the adult the thyroid body ceases to possess much functional importance.

CANADA
MEDICAL & SURGICAL JOURNAL.

ORIGINAL COMMUNICATIONS.

Valedictory Address to the Graduates in Medicine and Surgery, McGill University, delivered on behalf of the Medical Faculty, at the annual convocation, held in the William Molson Hall of the University, on Friday 31st March, 1876. By THOMAS G. RODDICK. M.D., Professor of Clinical Surgery.

GENTLEMEN GRADUATES:—In accordance with a time-honoured custom I am here on behalf of the Medical Faculty of this University to convey to you their hearty congratulations on being this day the recipients of the highest honour which it is their privilege to bestow.

After a long, and in the main, a tiresome race, lasting over four years, you have at length reached the winning post, and are here to-day in the presence of a gracious and admiring assembly to be decked with the laurels you have so nobly won. In no race can all be first, but on this occasion the judges have unanimously ruled that you were all "on time." The goal at which you now stand is however not the last by many on this great course. You have completed the first heat only, the prizes for which alone are offered and distributed here, so that there is abundance of time for even the last man to pick himself up and show a brilliant record on the great home stretch. Remember that in the future the struggle ceases to be a college contest where as companions you are pitted against each other.

You are soon to meet well-trained and more determined competitors who will try your mettle to the very uttermost. However, of this be assured, if it may prove any stimulus to you, that wherever this Faculty, as your trainers, find a man of '76, running a fair and honourable race, they will always be prepared to back him against all comers.

You are to be congratulated, Gentlemen, not only in having graduated in Medicine, but in having done so at such an auspicious period in the history of the profession of your choice and in the history of our country. There never was a time among us in this Dominion, when energetic workers, honest conscientious men were in greater demand. It is certainly time to be up and doing when we have one of the chief leaders of public opinion in our midst—a journal of which we would have expected better things—upholding the cause of quackery, and imputing to us the basest motives because we dared to vindicate our rights, and raise a warning voice on behalf of a deluded people. The Toronto *Globe* asserts with an air that can hardly be mistaken for earnestness, that to molest these charlatans in their absurd and often nefarious practices is an unwarranted interference with the "liberty of the subject." It positively contends that any one who considers himself competent either through some inherited charm or from mere vanity, to treat the various troubles of the flesh to which humanity is heir, should be allowed to do so unmolested. The evil consequences of such a policy cannot be estimated. It is difficult to understand, indeed, how it should find so strong an advocate in this otherwise respectable mouthpiece of public opinion. The *Globe* in its endeavour to place us all on a level with the itinerant mountebank must evidently be a firm believer in the theory that some men are "born doctors." This journal of such communistic proclivities in matters medical, chooses to ignore the time and pains we have expended, and the pecuniary outlay we have made, in endeavouring to acquire a thorough knowledge of our profession, so that we may the better inspire an ever credu-

lous public with our ability to heal. Unfortunately the great majority of suffering humanity are unable, from their total ignorance of pathology, to discriminate between those diseases which, humanly speaking, are absolutely incurable, and those on the contrary whose tendency is towards a favorable termination. Hence these naturally fall a prey to the machinations of the unprincipled charlatan, who with vain deceit leads on his victims to their physical ruin and worldly embarrassment. Forsooth, we are told, that to raise a warning voice, and endeavor by legislation to rid society of such members is to interfere with the liberty of the subject. It is not jealousy that impels us in our action against those clever rogues who can amass riches when honest men starve,—give us our due, it is not jealousy,—but an honest desire, irrespective of our profession, to protect our fellows from fraud. It has been well sung:

> "When men of infamy to grandeur soar,
> They light a torch to show their shame the more;
> Those Governments that curb not evils, cause;
> And a rich knave 's a libel on our laws."

You are called upon then, Gentlemen, on the very eve of your professional birth to do battle for legitimate medicine. This refers especially to those of you whose lot will be cast in the neighboring Province of Ontario, which seems to be the favorite haunt of those proteges of the *Toronto Globe*.

The influence which many of you must of necessity wield in a few years, cannot better be employed than in assisting to stock the legislatures of your respective Provinces with men, either professional or lay, having decided and intelligent views on the all-important subject of medical legislation. The fact is we are nowhere as well represented at Court as we might be. We are not the power in the state we should be. It is true there are members of our profession in our General and Local Parliaments, but with a rare exception, how feeble are their voices when we would expect to find them loudest in debate. There are two or three who do us credit, and whom we delight in honouring,

but even they, after long political careers, fighting their party battles, or from other causes, have become estranged from us, and are more famous as financiers and expounders of the law than as sons of Æsculapius. Besides, our services I contend, are required in the Assemblies of the country as much on her account as on our own. Those great measures of sanitary reform which must in the natural course of things be promulgated and at length accomplished, will of necessity be in great part the work of our hands. Who than we can better direct the enactments respecting vital statistics, vaccination, and the proper ventilation and drainage of cities? Who than we can better advise measures for the prevention of epidemics, and the grappling with them when they appear? Who than we can give more decided opinions on all subjects having a sanitary bearing? It is our province, it belongs by right and title to us, and while the financiers of our legislatures are squabbling over their dollars and cents, and "ways and means," while the manufacturers are keeping a weather eye open to the tariff, let us have men there who, irrespective of party, conservative and liberal, tory and whig, will rally round the one flag when the war note is sounded. "Sanitas sanitatum omnia sanitas."

As medical men, and taking as you no doubt will a prominent place in the communities in which you work, you will be expected to give a ready and intelligent opinion on the various topics of the day having reference to sanitary science. The relation of defective drainage, impure water, and adulterated milk, in the causation of Typhoid fever, will come up for constant discussion. The subject of overcrowding, adulterated food, impure air, occupation, &c., in the influence they exert in modifying existing disease, and in the production of disease, will be matters on which you will be expected to be thoroughly versed. There is nothing however in the discussion of which your temper and ingenuity will be more sorely tried than in the defence of that priceless prophylactic, *vaccination*. Have at your finger ends some of the more familiar facts connected with this all

important subject, in order to meet the objections of those who have unfortunately imbibed erroneous conceptions on the subject. Relate to them, for instance, the telling observations of Drs. Buchanan and Seaton on 50,000 children during the epidemic of small-pox in London in 1863. How of every 1000 children without any mark of vaccination, no fewer than 360 had scars of small-pox; while of every 1000 children who had evidences of vaccination only 1·78 had any such traces. With regard to the quality and amount of the vaccination it was found that of children having four or five scars, only 0·62 per thousand had any trace of small-pox. How it was found that the best vaccination was more than thirty times as protective as the worst, and the worst was more than fifty-seven times better than none at all. Tell them that in the city of Montreal, during the last year of your studentship—the year 1875—the total number of deaths was 6,311, of which nearly one-eighth, or 784, were from small-pox, and of these 653 were unvaccinated French Canadians. If such facts fail to make an impression on these unbelievers, tell them that in the year 1874 there were 55 unvaccinated persons admitted into the small-pox wards of the Montreal General Hospital, of whom all, five excepted, had the confluent form of the disease and 28 died, showing the awful mortality in the unvaccinated of over 50 per cent. On the other hand, among those who had been once properly vaccinated, there were only four deaths, and where revaccination had been successfully performed, only two cases had been admitted, and these were of so mild a type that but for the danger to others, the patients might have followed their ordinary avocations. You will meet many who are thorough believers in vaccination as a preventive against the virulence of small-pox, but who are haunted with the idea, that other constitutional diseases are propagated through the medium of the virus employed. To such I would recommend you, to quote in refutation the observations of Dr. Curschman of Berlin, one of the most reliable authorities and probably the most recent observer on this

division of the subject. He says: The possibility of the transmission of a disease through vaccination has thus far been demonstrated in but a single instance, and that is *syphilis*. Could the opponents of vaccination show that this occurs with any degree of frequency, or is with difficulty prevented, vaccination would thereby receive a severe blow; but here lies the weak point in our opponents' deductions. In the first place, those cases where the actual inoculation of this disease has been verified are so exceedingly rare that the objections based on them are consequenly materially weakened. The force of these objections is still more impaired by means of the evidence almost always present that the unfortunate result was due to actual carelessness, or to an oversight easy to be avoided. Nearly all of the unhappy occurrences of this sort are not the fault of vaccination, but of its improper performance.

Endless evidence could be brought forward to sustain your position as an advocate of the cause of vaccination, but what I have related will stand you in good stead if taken unawares by our wily opponent.

Speaking to you, Gentlemen, as an elder brother, I would remind you of the important position in society you this day assume. While before you gloried in a condition of absolute irresponsibility, you will have from this hour forth the piercing gaze of a world, not over charitable, directed upon you. Like a child leaving for the first time its mother's lap to waddle alone, you are at this moment commemorating the dawn of an independent existence. You have to-day received from your Alma Mater your commission, with her seal attached, to pursue the responsible and arduous task of caring for the life and health of your fellow mortals. Yours is a glorious mission. The profession you have chosen,—"blessed art of healing over again divine," is worthy of your proudest devotion—"ennobled as it is by endless examples of the most heroic self-sacrifice, and offering full scope for the exercise of the highest intellect, the purest philanthropy, the proudest ambition. Prove yourselves worthy members

of so honorable a brotherhood. Above all other things forget not the solemn vow you have this day taken and which is still so fresh on your lips, to render your services cautiously, virtuously and honestly, with wisdom, chastity and integrity. I stand here, Gentlemen, on this account more than on any other to implore you in the name and for the sake of this great University, in the name and for the sake of our common humanity, on behalf of all that is near and dear to yourselves, to pursue a course of prudence, sobriety and honour.

As the majority of you will have ample leisure during the first few years of your professional life, it cannot better be employed than in the endeavour to bring up the leeway—to work up those points on which you now consider yourselves weakest, and at the same time to keep pace with the progress of medical science. On the manner in which you spend these early years will depend to a large extent your future success in the practice of your profession. Every case which you are called upon to treat, no matter how simple in itself, should be made your earnest study, so that after a time you will have become accurate observers, and will have stored up certain definite facts in the diagnosis and treatment of disease, which will stand you in good stead later on in life. Medicine, especially in some of its departments, is progressing with such gigantic strides towards perfection, that in order to keep in line and not be numbered among the stragglers, it will be necessary for you to consult from time to time the more advanced authorities, and at the same time to subscribe to the leading periodicals of your own and mother country. Encourage home manufacture in medical literature, when deserving, not only by your pecuniary support but by the contribution of original matter culled from your own practice. By so doing you will not only benefit your fellows, but you will escape that painful obscurity—that species of living death—into which so many of our profession fall. I would caution you sedulously to avoid anything approaching what has been styled "news-

paper quackery," or the system so constantly practised among country physicians (and not unknown I am sorry to say, in some of our large cities,) of publishing or allowing to be published thrilling accounts of their surgical operations or wonderful cures. Such a course is not only unprofessional, but publications of this nature have a demoralizing influence on those who read them, and the cause of medicine suffers materially thereby. Medical contributions should see the light only through the medical press.

In your intercourse and dealings with each other remember the golden rule "do unto others as ye would others should do unto you." You will find as a rule, and especially in the early years of your career, that you have to deal with a selfish uncompromising public, who in the endeavour to have their own purposes served, care not for your feelings or friendship, and heartlessly ignore those rules of professional etiquette which it should be your duty as well as your privilege to sustain. It sometimes happens that misunderstandings will occur in the most careful hands, but do not willingly tamper with the property of another. Let us earnestly hope that the game of grab, so long practiced in country places between members of our profession, has been played for the last time. To you and future graduating classes we will look to elevate the standard of professional morality far above any height in this direction it has yet attained.

In all cases of doubt, or where you have the slightest suspicion that the former confidence of patient and friends in your skill and judgment is being lost, fail not for the satisfaction of all and your own protection to call in other aid. In your capacity of consulting physician also caution, is demanded, for in your hands here will often rest the renown and reputation of a confrere. One of those ominous shakes of the head, or a shrug of the shoulder will in a twinkle destroy the credit of a brother and to you will be born a false unenviable reputation. Be true then, one to another, remembering the wholesome advise of Polonius:—

"This above all,—to thine own self be true;
And it must follow, as the night the day,
Thou can'st not then be false to any man."

To the poor be kind and charitable in the disposition of your professional services. The poor man bowed down by infirmities will demand a large share of your sympathy and support. It is true his poverty may be self-imposed, but your obligations are none the less binding. "Whoso seeth his brother have need and shutteth up his bowels of compassion, how dwelleth the love of God in him." In the language of an eminent divine: the poorest of you can afford to be kind; the least gifted of you can practice that loving wisdom which knows the straightest road to human hearts. You may not be able to thrill senates with your eloquence, but you may see eyes sparkle and faces gladden when you appear. Men will feel your influence like the scent of a bank of violets, fragrant with the hidden sweetness of the spring. Men will miss you when you cease from their communions as if a calm familiar star shot suddenly and brightly from their vision; and if there wave not at your funeral the trappings of the world's gaudy woe, "eyes full of heart-break" will gaze wistfully adown the path where you have vanished, and in a long aftertime hearts which you have helped to make happy will recall your memory with gratitude and tears.

Gentlemen: Fare you well.

Case of Severe Syphilitic disease of the Rectum with Stricture.—Colotomy.—Successful. Under Dr. Ross. Reported by Mr. C. N. STEVENSON.

Zoe S., 31 years, was admitted into the Montreal General Hospital on the 23rd September, 1875, complaining of severe sacral pain and excessive suffering during the act of defecation. She is a small woman, decidedly anæmic, but not unusually thin. Her family history is good with the exception of one sister who died of rapid consumption, and

another who is an habitual sufferer from Spasmodic Asthma. She has herself enjoyed good health until about five years ago, when she contracted syphilis from her husband. She is not aware of this primary sore having been followed by either sore throat or any general rash. Two years afterwards, however, she began to suffer from symptoms referable to disease in the rectum, and for this was treated by a surgeon of this city, with the result of becoming much better. The disease had, nevertheless, not been entirely cured, for one year subsequently, she came under the care of Dr. Ross with renewed trouble in the same quarter. She had at this time a moderately tight stricture of the rectum, and considerable thickening of the submucous tissues. Gradual dilatation by means of graduated bougies, together with a long course of internal anti-syphilitic treatment, again gave temporary relief. The stricture, however, soon began again to contract, and her sufferings in proportion to be augmented. She therefore resorted to the hospital to try and seek a cure.

Her condition at present is one of great distress. At ordinary times, and when at rest she does not suffer much beyond a certain amount of pain of a dull character in the rectum itself, and sometimes more severe pains of a somewhat colicky nature in various parts of the abdomen. It is however in connection with the periods of defecation that by far the greatest amount of suffering occurs; for some time previous to this the pains ordinarily endured became very much increased, and then during the actual passage of fæces her sufferings are perfectly agonizing, often producing great faintness and exhaustion. The pain is of a hot and burning character, described by her as a feeling as though molten lead were running down the bowel. This pain occupies the whole region of the rectum, radiating also outwards through both hips and sometimes extending down the thighs. It does not cease after defecation is completed but continues, keeping her in great suffering for sometimes several hours. There is a slight brown-coloured watery discharge from the rectum, without any peculiar fetor.

There is very seldom any appearance of blood with the evacuation, but this has occasionally been observed in small quantities. The stools are generally of moderate consistence, and come away in small irregular pieces, often flattened.

On making a digital examination it was found that the rectum was involved in the whole of its calibre by a dense cartilaginous, irregular mass. The obstruction began about one inch within the anus, beyond which lay two distinct strictures, through both of which the finger could be just passed. At the extremity of this again and just as far as the finger could well reach, was felt another but smaller opening through which the finger could not pass at all. The examination gave a great deal of pain. A No. 2 Rectal bougie was subsequently passed, and was found to be just the size of the uppermost constriction.

Ordered: R. Potass Iodid 3i; Syr. Ferri Iodid ℥vi; Aqua ad ℥vi.

One tablespoonful three times a day, and to have a bougie passed daily, gradually increasing its calibre, if found practicable.

Oct. 17.—No result so far from treatment. Have only increased one number of the bougies, and the introduction is extremely painful. Complains of having had for some nights severe sweats. Chest examined and found to be healthy. Ordered a pill containing gr. ij. Zinci oxyd., to be taken each night at bed-time, and to have three tablespoonfuls of cod-liver oil every day.

Oct. 25.—Obliged to discontinue the use of the bougies on account of the great pain produced.

Nov. 1st.—Patient continues to suffer very much. Describes her torture as unendurable, and is willing and anxious to submit to any treatment which might offer prospect of relief. Under these circumstanees, and especially considering the hopelessness of ever curing such a rectum, now composed of hard, unyielding, almost cartilaginous masses, Dr. Ross decided upon performing colotomy in the left loin,

provided his colleagues agreed with him as to its advisability. She was therefore seen by Drs. G. W. Campbell, Fenwick and Roddick, who all concurred in this view of the case.

Nov. 11th.—After consultation of the entire staff of the Hospital, the operation was performed as follows: Drs. Fenwick and Roddick acting as assistants. The patient having been brought fully under the influence of ether, she was laid upon her right side, and a firm pillow placed beneath the abdomen, so as to render the left loin prominent. The operator had taken the precaution to mark, as recommended by Mr. Allingham, a spot midway between the two iliac spines to serve as a subsequent guide. An oblique incision was then made, 4 inches long, in the usual situation, and the dissection continued upon a director until the edge of the Quadratus Lumborum was distinctly exposed. This was then moderately notched, and the bowel was found, as always, directly beneath it. It was not easy to distinguish the longi udinal markings which are characteristic of the large bowel, and besides it was empty and flaccid (because there had never been any complete obstruction). The operator therefore being without these two important guides as to what lay before him, to increase his assurance of the identity of the part, requested an assistant to force air into the bowel by means of an ordinary enema syringe. This was quickly done, and, as it was effected the bowel rose fairly up into the wound. This then was seized and transfixed. The peritoneum was seen but hardly at all exposed and no difficulty was experienced in avoiding it. The bowel being then well drawn out, it was transfixed by a second catgut ligature, the two being about one inch apart. An incision of that length was made into the intestine, and its edges were stitched to the sides of the wound. Other catgut sutures were also introduced at either extremity of the wound. The position of the intestinal opening was found to be very close to the posterior angle of the wound. A dresssing was applied consisting of a layer of doubled lint

soaked in carbolic oil (1 to 20), and a thick covering of fine oakum and a flannel roller.

She was put to bed and ordered to have, after a time, frequently-repeated very small quantities of beef tea and milk, and to take pulv. Opii. gr. i every 4 fours.

9 P.M.—Has been pretty comfortable with the exception of some uneasiness in the abdomen. Temperature 102 2-5. Pulse 136°, rather wiry, with a tendency to irregularity. Expression dull and anxious-looking. Is kept moderately under the influence of the opium. No abdominal pain. No vomiting. Moderately tender on pressure over the left side of the abdomen in front. Had a slight chill last evening—wind has been passing to-day through the artificial opening. Complains of a bad cough, (this was evidently caused by the ether.) Wound looks well.

9. P.M.—Temp. 103 3-5°. Pulse 130.

Nov. 13th.—Temperature 103 3-5°. Pulse 130; softer and more regular. Expression much better. Abdominal tenderness less. Tongue moist and clean.—Wound looks well.

9 P.M.—Temperature 100 4-5°. Pulse 104.

Nov. 14th.—Much better, Temperature 101 4-5°. Pulse 112. Finds the opium beginning to tend to nauseate. Was therefore ordered instead Sodæ Bicarb. gr. v. Liq. Morphia, 3ss. every 4 hours. No tenderness on pressure. Cough still very troublesome, and accompanied by a considerable amount of expectoration. Wound looks very healthy, with a moderate amount of suppuration from it.

9. P.M.—Temperature 102°. Pulse 108.

Nov. 15th.—Temperature 102 1-5°. Pulse 102. Quantity of Liq. Morph. reduced to gtt. xv. For the first time passed this morning a small motion from the artificial anus. All the ligatures holding the bowel were withdrawn to-day. Cough much better. Was ordered 3 oz. port wine.

Nov. 16.—Doing well. Temperature 100 1-5.° Pulse 104. Wound discharging pretty freely. A small compress was arranged on the posterior portion of it. Feculent mat-

ter keeps passing readily by the new opening. Appetite improving. In good spirits.

Nov. 17th.—Temperature 101°. Pulse 104.

All the remaining sutures were removed and the wound held together solely by strips of adhesive plaster.

Nov. 18.—A good deal of tenderness about the back part of the wound, and pus wells up pretty freely upon pressure here. Cough still somewhat troublesome, and causes a good deal of pain about the wound. Slept well but perspired very freely on first awaking this morning.

Nov. 19. —Temperature 99°. Pulse 100. Two easy motions through false anus.

Nov. 20th.—Temperature 98 2-5°. Pulse 100. Ordered Ung. Zinci oxyd to be applied round the margins of the bowel, as the acrid oozing from it is tending to excoriate the skin. The wound is to be syringed daily with carbolic acid lotion, (1 to 40).

Nov. 21st.—Comfortable and cheerful. Wants to get up. Was allowed oysters.

Nov. 22nd.—Discharge much diminished ; wound healing nicely. Temperature normal. Pulse 90. Cough nearly gone.

Nov. 24th.—Was allowed up to-day for the first time.

Dec. 1st.—Doing well. Fæces being discharged in moderation several times daily. To-day a small motion also passed from rectum but seemed to cause no pain. There is a slight tendency to prolapse of the mucous membrane. A graduated pad of lint was therefore ordered to be applied.

Dec. 7th.—No re-appearance of prolapse, and pad discontinued. Has been somewhat constipated lately, and was therefore ordered Pil. Rhei, Co. No. iij, at bed time.

Dec. 15th.—No discharge from wound. It is nearly quite healed. Sits up and begins to feel quite strong.

From this time she remained perfectly well. The artificial anus performs its office quite satisfactorily, and she is entirely free from pain. She was provided with an instru-

ment for the purpose of closing the opening, except when an evacuation was required. This was composed of an oval and convex block of box-wood, made just to fit into the opening, and pass obout ¼ of an inch within it. This was attached to a broad, flat pad, and the whole retained *in situ* by suitable straps. Discharged 15th January, 1876.

Cases of Acute Articular Rheumatism treated with large doses of Salicylic Acid. By R. D. MACARTHUR, M.D., C.M. Chicago, Ill.

CASE 1.—*Acute Inflammatory Rheumatism.*

W. N. B., aged 29, was the subject of an attack of Inflammatory Rheumatism, precisely three years ago, affecting all the joints and complicated with endocarditis, the attack lasting six weeks.

March 1st, 1876.—Found patient in bed with several of the larger joints affected, very emaciated, and great debility from riotous living and dissipation.

Was immediately put upon the Alkaline treatment, with Iodine applications to the swollen joints which were rolled up in cotton batting; this was continued with tonics, nourishing diet, &c., for 15 days, my patient becoming weaker, and th erheumatic difficulty growing worse from day to day.

March 16th.—Patient very much depressed in spirits; haggard countenance. Anæmic murmur at base of heart, and every joint in the body affected with rheumatism.

All previous treatment discontinued. Was ordered 10 gr. doses of Salicylic acid every 2 hours, in wafer paper, commencing at 10 a.m.

Met Professor Allen at 7. P.M., in consultation; found patient very much improved, countenance quite bright, and the stiffness and soreness of the joints very much diminished.

Professor Allen very kindly consented to give the Salicylic acid a fair trial, although he had no faith in it.

17th.—Patient exclaimed on my entry into his room that

he had no use for me, the rheumatism was all gone. Had slept well all night, for the first time since the illness began, except when to take medicine. Prior to this, he had used Potass. bromide. Pulv. Doveris, &c., to procure sleep but little benefit resulting from them. Had now taken 120 grains of the acid, with no unpleasant effects, except hyperæsthesia in hearing

On account of illness, did not see my patient for five days after this, when I learned that the day prior he had some rheumatism in his left shoulder, elbow and wrist. Ordered the acid to be repeated, he now took 240 grains additional, with entire removal of all rheumatic symptoms. From this time forward no relapse occurred, and his recovery was rapid and permanent.

The treatment followed is that of Dr. Stricker, of Charité Hospital, Berlin.

CASE II.—*Polyarthritis Rheumatica cured in* 36 *hours.* 360 grains of the acid administered in 10 grain doses consecutively.

M B. Thompson, aged 46, came to Chicago last Fall from Alabama, where he had been a victim of Yellow fever and Intermittent; had the last disease almost continually for the past three years, whilst living South.

March 26th, 1876.—Arrived at patient's house at 4 p.m. Found him unable to stir hand or foot, or turn over in bed. Face flushed. Temperature 104.6°. Pulse 136; respirations 27. Tongue coated. Suffering most acute pain in all his joints, which were very tender and swollen, even the carpal and phalangeal articulations were greatly swollen. Immediately prescribed the acid in 10 grain doses, to be taken every two hours. No other medicine.

27th. 10. A.M.—Temperature 101°. Pulse 97. Slept well after 2 a.m.; joints could be moved freely without producing much pain. Swelling diminished, tongue moist, perspiring freely. The acid to be continued.

28th.—Pulse 80 ; temperature 99°. Swelling of joints entirely disappeared, could be freely handled and moved about, without producing the slightest pain. Ordered the acid to be continued every 4 hours. This was my third and last visit, as my patient's wife reported from day to day his condition. The acid was continued, until he had taken 360 grains in all, when the rheumatic symptoms had completely subsided.

On the 8th day of the attack was put upon a tonic mixture of Iron and Quinine. His convalescence was rapid. Walked around and about the house on the sixth day. No toxic effect from the drug, except singing in his ears, and considerable dullness in hearing.

Chicago, Ill., 11th April, 1876.

On the use of Oleum Erigerontis Canadensis in the treatment of Gonorrhœa By G. A. STARKE, M.D., C.M., Milwaukee, Wis.

I desire to call your attention to a remedy which I have been using for some time back, (4 years) in the treatment of Gonorrhœa. I refer to the Oil of the Canada Fleabane—Oleum Erigeron ; Canadensis. I am not aware that it has been brought prominently before the profession as a remedy in the above-named disease. Its properties are very briefly noticed in works on Materia Medica, and as far as I am aware it is not mentioned as a remedy for Gonorrhœa in any of the text-books. The results in most cases in which I have prescribed the oil, the patient adhering strictly to directions, have been entirely satisfactory, and in some cases astonishingly so. In the majority of the cases the discharge ceased in from two to six days. I have only taken notes of its effects in what I considered true cases of Gonorrhœa. After having administered some suitable purgative, generally saline, I then exhibit the medicine in doses varying from five to twenty drops, every two, three or four hours, as judged most prudent in each particular

case. I have also given the oil in several combinations. The diet is also to be carefully regulated.

If you consider this worthy of notice, and wish reports of some cases treated by the oil—setting forth the combinations in which I have administered it—I will gladly send them.—*Milwaukee, Wis. April*, 1876.

We cheerfully record Dr. Starke's observations and shall be pleased to hear from him again on this subject.—Ed.

TRANSLATIONS.

Dr. von Dessauer (of Valparaisso)—Passage of an unusually large gall stone (Virchow's Archiv. Bd. lxvi. Hft. 2.)

On the 12th December, 1873, I was called to see a French lady, Madame ——, who had been ill two months, and under the treatment of Dr. Allende, who, on his departure, handed her over to me. Of the previous history and treatment I could obtain nothing certain, further than that the lady had several times suffered from jaundice and severe colic. She had never borne children. On the present occasion her suffering was beyond all description—she screamed and roared with pain, rolling and writhing on the ground. For 11 days she vomited everything, even the fæces, and for 14 days had had no passage from the bowels. I found the patient of a dark-yellow colour, with deep set eyes, and a a face betokening inexpressible anxiety ; the body covered with a cold, clammy sweat ; pulse not to be counted from its rapidity, thready and weak. In the hepatic region at the margin of the ribs was a very painful tumour about the size of the fist. The whole liver was enlarged, painful on pressure and percussion. A second such tumour, twice the size of the fist, of doughy consistence, and tolerably painful, existed in the region of the Valvula Bauhini (ileo-cæcal.) My diagnosis was biliary colic, produced by the impaction of calculi in the ductus choledochus and Valvula Bauhini, and it was presumed that the concrements were either very large or very numerous. Seeing that no medicines could be taken by the mouth—everything was vomited—and that

subcutaneous injections. chloroform, baths, &c., had been used in vain, I determined to employ opium in large doses, in order to aid the passage of the concrement by the possible relaxation of the circular fibres of the intestines. At the same time small bits of ice were given.

After a terrible night, and after the employment of 11 clysters, each of which contained 6 grs. of opium, I had the satisfaction about noon the next day of obtaining several copious biliary stools, and on examining the patient the tumour in the hepatic region—corresponding to the gall bladder—and also the one in the right inguinal fossa had disappeared,

On washing out the stools, a calculus, the size of a walnut, was found. The stercoraceous vomiting had entirely ceased. The patient was quite comfortable, felt hungry and partook with relish of fluid nourishment. The pulse became normal.

On closer inspection the stone was seen to have a roundish, conical, somewhat pyramidal form, and presented at the base some smooth facets. I concluded from the general appearance that a second equally large stone existed, either in the gall bladder or had already passed the common bile duct. There was thus another attack to be expected, and I determined quietly to await the same, and meanwhile suspended the treatment.

Although the large dose of 66 grs. of opium had been given in the 24 hours, there was no symptom of poisoning evident.

On the 14th December, a fresh swelling began to form in the region of the ileo-cæcal valve, and by degrees all the above described symptoms quickly recurred. The second stone had made its way through the ductus communis choledochus and stuck fast in the intestine at the point indicated. I repeated throughout the 15th December the above treatment; there were six clysters employed, (one every third hour) each with 6 grs. of opium. On the night of the 15th and 16th, with spasmodic vomiting and evacuations, the second stone, almost as large as the first, was expelled.

The after treatment corresponded to the indications. I gave Durand's remedy, (ether 3iii. ol. terebinth 3ij. 3i every morning), and Vichy water. The patient recovered in a few days, and the jaundice disappeared with remarkable rapidity. I sent her to the Baths of Canquenes; when leaving she weighed 112 lbs., on her return six weeks later, 138 lbs., and meanwhile had enjoyed perfect health. It is worthy of note that the large doses of opium 6.5 grammes = 102 grs. were borne without any symptoms of poisoning.

The two stones are egg-shaped, smooth, pyramidal at the points. One facet is concave, the other convex. Together they are about the size of a small hen's egg, measuring 9½ Cm., (3¾") in circumference, 15 Cm. (6") round the long diameter,and weighed 22.5 grammes. The surface is smooth and of a dark brownish-yellow colour.

When we consider the size of these stones and the diameter of the gall ducts, it appears inexplicable how they could be forced through such a narrow canal without producing extensive destruction of the same.

Note by Prof. Virchow.—I have received through Dr. Boher the above stones, which consist of cholesterin and bile pigments, and have been correctly described by Dr. Dessauer. As to the question how they passed through the gall ducts, it may be said that it could only be possible by ulceration of the bile ducts or gall bladder, and direct perforation of the duodenum, and not by dilatation of the ductus communis choledochus. Pathological experience affords many proofs of this. The passage of such large stones during life is a very unusual occurrence, and I thank Dr. Dessauer for his communication.

NOTE.— A somewhat similar case to this occurred in the spring of 1873 in the practice of Dr. Archer, (McGill) then of Osnaburgh Place, now of Wandsworth, London, in which after symptoms of obstruction, lasting over a week and of great severity, a large gall stone was passed. It was single, of an elongated form, and, as far as I remember, corresponded very closely in size to the one above described, i. e., about

the size of a small hen's egg. In this case there was, I believe, no tumour perceptible. Instances of this kind are extremely rare. On looking up the subject for Dr. Archer in the British Journals I could only find reference to some half dozen cases.

W. O.

Krönlein, Open and Antiseptic Treatment of Wounds.—Results of the two methods of treatment compared from Statistics furnished by the Clinics of Zürich, Leipzig and Halle. Archiv. f. Klin. Chir. xix. S. I.

The comparison of the two methods confines itself to the major amputations of the extremities, the conservative treatment of complicated fractures of the long bones of the extremities and extirpation of the breast. Further, the comparison extends to the most important accidental wounds, when they are met with within the period, in which it has been customary to employ the above mentioned methods of treatment.

Referring to amputations of the extremities, the tabulated summary gave a mortality of 30 per cent. where the after treatment had been antiseptic and only 20 per cent. where the open method had been employed. The number of traumatic amputations was about half in both sets of cases, so that here as little as the difference of sex and age, can the difference in mortality be accounted for. The relative difficulty of individual cases of amputation due to severe injuries, and the length to which the conservative treatment had been pushed might account for the difference in the mortality. Of the cases of complicated fractures amputated and afterwards treated antiseptically, 41 per cent. were accompanied by dislocation, those cases treated by the open method only 29.4 per cent.

Krönlein says, that the results of amputations treated by the open method are better, this can only be ascribed to the after-treatment, though in cases treated by this method the conservative treatment has been pushed to a greater extent

than in those cases treated antiseptically. We can only compare the statistics of the results of the conservative treatment of complicated fractures, in fractures of the leg; here we have 13 cases treated antiseptically, with no deaths, and 31 cases treated by the open method, with 9 deaths. This unfavorable result in the latter mode of treatment is explained partly by the advanced ages of the patients; among the thirteen cases treated by the antiseptic method, only two had reached 50 years, whilst in the cases treated by the open method, not less than 12 were between the ages of 50 and 70. Furthermore the tables show, that of the cases of complicated fracture, in 63·7 per cent. the open method was employed, and the antiseptic method in only 39·5 per cent. Further, that in the cases of complicated fracture that were amputated of those treated antiseptically 51 per cent., and of those treated by the open method only 24.4 per cent., were accompanied by dislocation.

Excision was performed in 6·8 per cent. of all cases treated by the open method, and of those treated antiseptically in 9.3 per cent.

Of 22 women who were operated upon for cancer of the breast (18 with removal of the glands of the axilla) and treated by the open method, 3 died; of 13 cases treated antiseptically (with the removal of the glands of the axilla in 8 cases) 5 died.

With regard to pyæmia and septicæmia, both methods are equal, neither completely protect. Cases treated by both methods are nearly free from erysipelas.

Krönlein says that the time of healing is much shorter in the cases treated antiseptically than in those treated by the open method. The ratio is as 1 to 2.

Primary union occurs much more frequently in wounds treated antiseptically, which accounts for the rapidity of cure in many cases; amongst all the modes of healing, primary union most accords with the views of science, it also leaves the best looking and most useful stump. A favorable course free from fever is as common in one as the other.

The bad effects of Lister's bandages are obviated by Thiersch's modification, which although more expensive than the open method of treatment is two or three times as cheap as Lister's carbolic bandages. Concerning the limit within which the above methods of treatment are admissible and applicable, particulars are wanting.

F. J. S.

Hospital Reports.

MEDICAL AND SURGICAL CASES OCCURRING IN THE PRACTICE OF THE MONTREAL GENERAL HOSPITAL.

Two Cases of Acute Rheumatism treated by Salicylic Acid.

BY DRS. FENWICK & REDDY. Reported by J. D. Cline, B.A., M.D.

1,—Sarah Ferguson, æt. 34, married, was admitted into hospital on the 28th of March. She was confined four weeks ago. She had chills and some Metritis four days after confinement, and occasional chills since. A week ago she began to have pains in one shoulder, and in her wrist and knees. On her admission the same joints were affected rather acutely, red, hot and swollen.

Temperature was 103°. Pulse 92. Tongue much coated. Perspiration free and acid, and urine acid. Heart sounds healthy. Ordered Acid Salicylic, grs. v, every three hours, in capsules. Passed a very comfortable night after a Dover's powder.

March 29th.—Morning temperature 102.1-5°. Evening 103°. To-night, joints very comfortable.

March 30th.—Morning temperature 100.2-5°. Joints still rather bad, and tongue foul. Ordered to take the Salicylic Acid every two hours. In evening tongue cleaner. Pain all out of the right leg; still some in left. Pain less in right arm. Temperature 100.2-5°. Heart still sound.

March 31st.—Pains all gone. Knee and wrist a little sore; tongue much cleaner. Morning temperature 99°; Evening 97.2-5°. Heart sounds normal.

April 1st.—Morning temperature 97.4-5°, after which it was normal. Pains in joint all gone. Case transferred to Dr. Reddy who stopped the acid. Heart still sound. Heart was not examined again till April 4th, when a loud systolic murmur was heard at apex. Dr. Reddy ordered her a mix-

ture containing Quinine. The heart was watched carefully and found to be free from murmur by the 10th. She was discharged on the 10th. Thus the patient was four days under the treatment, during which time she took in all 200 grains of Salicylic Acid, and was fifteen days in hospital

(2.) Julia Enright, æt. 14, was admitted into hospital on the 29th of March. Had been sick with headache and general malaise for nine days before admission. Had had pain in feet and ankles which gradually became worse. On her admission into hospital her ankles were very painful and swollen. Temperature 102 2-5 °. Tongue very foul. Ordered a dose of Ol. Ricini.

March 30th.—Pains extended to knees, wrist and elbows. Perspiration and urine acid. Temperature in evening 103.1-5.

March 31st.—Pains still severe, and also in hips. Ordered Acid Salicylic, grs. iij every two hours. Evening temperature, 103.2-5 °.

April 1st.--Slept through night after chloral grs. xv. Tenderness in joint much less. Still bad in one knee and hip. Heart healthy. Evening temperature 103 °. Doctor Reddy, whose service began to-day, increased the dose of Salicylic Acid to grs. v.

April 2nd.—Pain all gone from lower extremities. Right shoulder still painful. Found a loud systolic mitral murmur to-day. Tongue cleaning. No irritation been produced by the acid. Temperature this morning 99 °. Evening 98.2-5. After which it remained normal for three days. The treatment was stopped to-day.

April 5th.—Temperature went up this evening to 100 °. Had had pain over cardiac region, and some irregularity of pulse. Murmur persists. She was kept in bed at rest without any treatment except sinapisms over heart till the 8th, when she had slight pain in left shoulder, and an evening temperature of 100.2-5°. The Salicylic Acid grs. v. every two hours was begun again but stopped again next morning, when temperature was again normal and pain

had left shoulder. The heart murmur persists. The patient got her clothes on the 15th, and was discharged on the 19th April. This patient took 150 grs. of the acid, at first in three days, and afterwards for a slight relapse 60 grains. In this case it is worthy of notice that a heart murmur appeared during the treatment and persisted, and in the first case the murmur appeared, after the joint affection had disappeared. but in a few days it had subsided.

Periscopic Department.

SURGERY.

Large Veno-Cutaneous Nævus treated successfully by repeated Injections with Carbolic Acid. By S. MESSENGER BRADLEY, F.R.C.S., Surgeon to the Manchester Royal Infirmary.

A female infant, about eight months old, was brought to the out patient rooms of the Manchester Infirmary last November, with a large and prominent nævus situated above and extending into the helix of the left ear. The tumour which involved the cutaneous capillaries as well as the veins beneath, measured two inches and a half by one inch and a half, and was raised half an inch above the level of the surrounding skin. I resolved to treat the case as Lister advises, by the injection of carbolic acid; but first, to prevent any risk of embolism, I transfixed the base of the tumour with two long hair-lip pins at right angles to each other, and strangled the entire mass with a ligature tied tightly beneath the pins. I then injected five minims of pure carbolic acid, dispensing it as evenly as possible in minim doses, here and there over the whole tumour. The ligature was cut, and the needles removed in ten minutes. Little if any change was apparent, three days later, when

I repeated the process. After a further lapse of four days, no improvement being perceptible, I ligatured the nævus by means of a Fergusson's knot, and admitted the child into the hospital; its cries, however, were so piteous and continuous, that the house surgeon was compelled to remove the ligature in about six hours, and I do not think that its introduction contributed in any material degree to the successful issue of the case. The following week I again resorted to the injection, and repeated it at intervals of four and five days; but it was not until three weeks had elapsed, and the injections had been employed half-a dozen times, that any diminution was perceptible. At this period however, a decrease became manifest, and this decrease steadily progressed, *although no further injection was used*. From week to week until now (March 14th) the tumour is no longer at all raised above the level of the surrounding skin, and the integument has almost entirely regained its natural character and colour.

The point of chief interest here appears to be the gradual but very continuous action of the acid. Probably success would have been equally attained by fewer injections; and, in the next case of the kind, I should allow an interval of a week or ten days between the operations. But the really important fact seems to be, that we can confidently count on success by this safe and little unpleasant method; and when we reflect upon this fact, and at the same time call to mind the potency of electrolysis in the treatment of aneurism, where the long continued result following the operation closely resembles the action of injection in nævus, we are led to conclude that the entire chapter of the treatment of vascular tumour will have to be rewritten.

The remarkable way in which the stained skin recovered its normal colour in this case induced me to ponder upon the possibility of removing simple capillary nævi, or "mother's marks", which sometimes cover large portions of the body; and, at last it occurred to me, that the desired end might be achieved by "tatooing" such marks with

carbolic acid. On this idea I acted, and tatooed the first case that presented itself; the result answered my utmost expectations, for, in about three weeks, the port-wine stains quite disappeared, its place being taken by a cuticle of natural colour It is true that the nævus in this case did exceed half-a-crown in diameter, and up to the present time, I have had no opportunity of testing the efficacy of this plan upon large surfaces; but this I shall certainly do the first chance that offers, and will, if permitted, communicate the result to the BRITISH MEDICAL JOURNAL.

I may add, that I used an orninary subcutaneous syringe for the tatooing, first removing the piston and withdrawing my finger from the top each time I punctured the skin, so as to permit a small drop of the acid to escape.

I am, however, having a little instrument especially made which I think will be more convenient; it consists of a hollow tube of the size of a quill-pen, with a perforated top, and terminating in a somewhat similar fashion to the teeth of certain poisonous snakes, a small groove, down which the fluid runs, opening immediately above the lancet-shaped point of the instrument.—*British Medical Journal.*

Angina Ludovici. By A. DOIG, L.R.C.P. Ed. Surgeon Army Medical Department.

In the Journal of the 25th December last, appeared a note by Dr. F. Murchison on the above-named disease. It may be interesting to have some details of a series of well marked cases which occurred amongst the soldiers quartered in the South Camp, Aldershot, during the winter of 1874-5. The disease attacked young men, was in all idiopathic, and accompanied with most intense suffering and great general depression. They all presented the same symptoms as those described by Dr. Murchison, but suppuration occurred in not a few; and one case, of which the following are brief notes, unfortunately had a fatal termination.

Private R. J., 23rd Fusiliers, aged 22, four years in service, was admitted on February 4th. He had been complaining for some time prior of swelling in the neck, which had increased to such an extent that he was forced to report himself sick. On admission, the swelling was chiefly confined to the left side; the submaxillary, sublingual, and parotid glands of this side were swollen, intensely hard, and very painful. The right submaxillary gland was also very hard and tender, but not swollen to the same extent. The lower jaw was fixed and partially open; the tongue was pushed upwards to the roof of the mouth; deglutition was almost impossible; saliva dribbled from the mouth; breathing was somewhat difficult, and the pain and discomfort intense. His general state was one of great depression; his countenance was anxious. He could get no sleep; and it was with great difficulty that he could be got to swallow a little nourishment. The skin over the swelling was of normal colour, but slightly œdematous under the angle of the jaw. Stimulants and nourishment were given frequently in small quantities, and fomentations continuously applied. The swelling continued, however, to increase, but never lost its intensely hard character; the skin became more œdematous, and breathing became more and more difficult. The agony was now intense; and, as pus was suspected to be present, exploratory incisions and punctures were made under the tongue and externally, but no matter escaped. He continued in a state of the greatest agony up to the afternoon of the 8th, when he expired rather suddenly.

Examination forty-three hours after death.—A large swelling occupied the neck, chiefly on the left side, but extending somewhat to the right and down to about midway between the lower jaw and clavicle. On removing the skin over the swelling, the tissues were found in a gangrenous state, being infiltrated with a brownish-coloured, very fœtid, semifluid matter. The tissues involved extended from the middle line in front to a little behind the angle of

the jaw, and from the floor of the mouth above to the lower border of the cricoid cartillage below. All the tissues, glands, muscles, and areoiæ were involved. The larynx was surrounded by the morbid mass, but the tissues posterior to the pharynx were not involved. The portion of the lower jaw in contact with the diseasedglands was denuded of periosteum. The mucous membrane of the fauces —that covering the epiglottis, and the whole of that of the larynx—were in an œdematous state. The tonsils were slightly ulcerated, but not involved in the destructive changes seen in the neck. The lungs were deeply conjested, and both contained numerous hæmorrhagic infarctions. At each apex, a caseous mass was found; and the lung tissue around contained numerous small deposits of tubercle. Both right and left cavities of the heart were filled with clots partly decolorised. Nothing abnormal was fonnd in other organs.—*British Medical Journal.*

Gelatinous Disease of Synovial Membrane. (New operation) Lecture delivered Jan. 18th, 1876. By C. F. MAUNDER, F. R. C. S., Surgeon to the London Hospital.

Gentlemen,—I propose to-day to darw your attention to a disease which is very common under the age of puberty —I allude to gelatinous disease of the synovial membrane, popularly called "white swelling" when met with in the knee, but to which all joints are liable. It will be convenient to observe its progress in this joint because it is comparatively superficial, and its condition can therefore be readily appreciated by the senses of sight and touch. The onset and early stage are illustrated by the following case (reported by Mr. John Job, house-surgeon.)

John L——, sixteen years of age, was admitted under Mr. Maunder's care on Nov. 30th, 1875. The patient states that until 12 months ago he was quite healthy; he then, one day slipped from a ladder, and in falling caught his right leg between the bars. In this position he was suspended for two or three minutes. The accident caused him

very trifling inconvenience at the time, and it was not until the following day that he noticed the knee to be swollen and stiff; but there was no acute pain. He did not rest the limb. but followed his occupation, that of a ploughboy, as usual. For six months, beyond a feeling of stiffness and an occasional sensation of heat, there was little to trouble the patient; his general health was good and he slept well. Then the joint began to get painful, and he was obliged to give up work. and use a stick in getting about. He then came to the hospital. On admission, the patient, of light complexion and fairly nourished, said he had got thinner since the accident. The right knee was uniformly swollen the natural elevations and depressions being concealed. It was hotter than the surrounding parts. To the touch the swelling was elastic, yeilding a deceptive sense of fluctuation, and tender on pressure. The leg was slightly flexed with inability to straighten it. Slight wasting of limb. Family history very good.

The history of this case then is often the history of many others; some slight accident, of which little notice is taken at the time, and which probably is never thoroughly recovered from. At the same time there are many instances in which it does appear to be of spontaneous or of constitutional origin. From this point of view it is called strumous, a term which I understand to apply to a subacute or chronic form of inflammatory action tending in the direction of extensive cell-growth degeneration, and suppuration (occasionally to fibrination), rather than to resolution. The disease affects two classes of patients indiscriminately—the delicate and the fair, with chiselled features, clear complexion, pearly sclerotic, and fine hair; the plain and unattractive, with ill-defiined lineaments, thick skin and coarse hair. Now this is very different to a scrofulous disease consequent on tubercule, and must not be confounded with it. Pathology tells us that the altered condition of the knee, (for instance). which had caused the absense of its natural hollows and elevations, is due to a mass of cells growing,

some on the surface of the synovial membrane and towards the joint cavity, and others in the subsynovial tissue, and to such an extent as to encroach upon and even obliterate the joint-cavity, and to conceal the natural outline of the joint and to render it shapeless. Now these cells, when examined by the microscope, have all the appearance of granulation cells, and, like them, under favourable circumstances, will become developed into fibrous tissue. Unfortunately, in the majority of instances, the patient not being strong, degeneration follows and suppuration is established. Thus, a joint, remaining more or less swollen and stiff, becomes hot tender on pressure, and painful after exercise. At the same time the ligaments are invaded and disappear, the articular cartilages degenerate, the bone becomes carious, and sinuses are established in one or more directions, as in the preparation before you, and often in accordance with gravitation, in order that the pus and other débris may be discharged. While these destructive changes are taking place the hamstring muscles displace the leg backwards and rotate it outwards, both shortening and distorting the limb, and possibly to be followed by either amputation or excision. Happily in many instances the degree of disorganization which I have mentioned does not transpire but a fibrous anchylosis, more or less complete, occurs. Two such cases have been recently under my care, and left the hospital last week convalescent,

Charlotte B——, aged six years and a half, addmitted Sept. 28th, 1875. The mother stated that the child struck the left knee three years ago, when it became swollen and stiff, and ultimately painful, and remained so for a long time. She had a doctor for it, who called the disease "white swelling." The child is fairly nourished, somewhat anæmic, has dark hair and eyes and is very intelligent. On examination, the left lower extremity is much wasted, the leg, which is somewhat displaced backwards and rotated outwards, forms with the thigh when fully extended, an angle of 115°. The patella is immovable and fixed to the lower part of the outer condyle of the femur.

The case of Alice F——, eleven years of age, is almost similar in every particular. She fell and struck her knee five years ago; it gradually became swollen and stiff, but there was very trifling pain. She had never kept her bed.

You will recollect that these are the two instances in which, to remedy a deformity consequent on anchylosis of the patella to the femur, I performed a subcutaneous operation. With a tenotomy-knife alone in one instance, aided by a saw in the other, I separated the patella from the femur,—an all important step,—to promote extension of the leg. No discomfort whatever, no suppuration, followed the operation, and both children left the hospital last week greatly benifitted.

This preparation which I show you, where the patella is fixed to the femur by fibrou sanchylosis, while the tibia is somewhat displaced backwards, is in a condition similar to that in which the joint of each of those children was previous to operation. You will readily perceive that a patella so fixed is a direct mechanical obstacle to extension of the tibia upon the femur, and that it must be dislodged before that can be effected. The operation which I have suggested, and which you have seen me perform twice, had this object in view. In one case 45° of extension was gained by the operation, and the child gets about comfortably with a high-heeled boot.

In these two cases the granulation-cells, instead of degenerating into pus, were converted into fibrous tissue, as in a cutaneous cicatrix, leading to a firm union of the patella to the femur, but to a weak union of the latter to the tibia.

Prognosis.—This, you will at once see, is unfavorable, as the disease is rarely arrested, leaving the joint sound. This gelatinous disease of the synovial membrane may be conveniently divided into two stages. The *first* is characterized by *cell-growth*, while the *second* is illustrated on the one hand by the *adhesive*, on the other hand by the *suppurative* form of inflammation. Of these latter the adhesive is the least to be feared, while the suppurative is of grave signi-

ficance, because the necessity either for excision or amputation may arise during its progress.

Diagnosis.—The chief symptoms are (following or not some slight accident)—stiffness in the morning, causing limping, mechanical in its nature, due to the swelling; gradually passing off on using the limb; associated at first with painless swelling; to be attended by tenderness and pain, not necsssarily obliging the patient to lie up, unless suppuration, "starting pains," &c., arise. All these cases illustrate the insidious and comparatively painless nature of the malady even to anchylosis, neither of the girls having kept her bed.

Treatment.—Good diet, change of air, and tonics, including preparations of iodine, are indicated by reason of the chronic nature of the complaint, implying a serious constituional error. Perfect rest to the joint must be ensured by splints, with an occasional counter-irratant in the shape of a flying blister; and when heat and tenderness have nearly subsided, strapping and bandage, to support the cell mass and prevent venous congestion must be applied. When all danges of resuscitating inflammation appears to have ceased, friction and passive motion will much avail. Thomas's splint, such as I show you, as used by one of the above children,—with a patten attached to the boot of the sound foot, will allow the patient to take exercise in the open air, will promote extension and yet secure a certain amount of repose to the joint.

Tenotomy.— You will have remarked that, of my three cases, in that of the lad the disease was in its first stage, while in the two girls the malady has terminated in anchylosis with deformity. Now, as prevention is better than cure, I would suggest, as a rule of practice, that an attempt be made to prevent that deformity that you have witnessed in these children by a subcutaneous section of one or more hamstring tendons—at any rate the biceps, the power of which to rotate the leg outwards you can readily appreciate on your own person. I adopted this plan in the case of a child of a professional friend, and I believe with marked benefit. I propose to do the same in the instance of the lad above mentioned,—*The Lancet.*

MEDICINE.

On Defective Nerve-Power as a Cause of Bright's Disease.

By J. O. BROOKHOUSE, M.D., M.R.C.P., London.
Physician to the General Hospital, Nottingham.

Cases of chronic albuminuria are not unfrequently brought under the cognisance of the physician, whose etiology and course are not, to my mind, satisfactorily explained by the ordinarily received ideas regarding the pathology of Bright's disease.

I do not here purpose to enter into the question of the morbid anatomy of the kidney in this malady; but I may at the outset be permitted to remind the reader that, by careful observers, three different views, though perhaps really not so conflicting as at first might appear, are held as to the seat of the pathological renal change. Dr. G. Johnson believes this change to occur primarily in the gland-cells of the convoluted tubes; Drs. Dickinson and Stewart hold that the inter-tabular fibrous matrix is first the seat of disease; whilst the more modern theory—that of Sir W. Gull and Dr. Sutton—is that the outer coat of the renal vessels undergoes a hyaline fibroid change. These observations have reference to the small red granular kidney, which is commonly regarded not as a local affection, but as the expression of a constitutional state.

The precise nature of this constitutional state is one of difficulty, but the commonly received opinion is that gout or other allied blood-poison is the etiological factor. Without venturing to express any dogmatic opinion as to that portion of kidney-tissue in which the initial tissue alterations occur, we are able to come to harmonious conclusion as to the *nature* of the morbid process. It is eminently degenerative in type, and, attacking the gland in the part of greatest functional activity, soon interferes with its physiological work.

I regard many of the cases of chronic Bright's disease that come before me as illustrations of malnutrition in con-

nection with impaired and diminished nerve-power. It is not difficult—indeed it would only be the record of every-day experience—to cite instances of the influence of insufficient or perverted nerve-force in the impairment of the integrity of tissue and interference with cell-life and development. The physician finds such instances not merely in the wasting, but in the retrograde metamorphosis of tissue seen in paralysed limbs, or in similar changes in a persistent sciatics; the surgeon, in like changes by reason of pressure in the course of nerve-trunks, or wasting of the deltoid in injury to the circumflex nerve; the practitioner of ophthamic medicine, in a conjunctivitis or corneitis, the consequence of a disturbance of the first division of the fifth cranial nerve and branches of the ciliary ganglion. Are not these fair and incontrovertible proofs of the influence of sensory and vaso-motor nerves in the phenomena of nutrition? In support of my view of the occasional, not to say unusual, occurrence of chronic albuminuria in association with disturbed nerve-force, I will draw a picture from real life.

A man of middle age, of temperate habit, and with a good family history (free from those diseases usually credited with heredity), complains of langour, weariness, and a sense of fatigue on exertion altogether disproportionate to the effort. He is dyspeptic, flatulent, and with a tendency to constipation. The appetite is bad; he has occasional nausea; the tongue is fairly clean, but pale, and marked with the teeth. Sleep is disturbed, not from pain or other very apparent cause, but a general restlessness. He has sometimes to get out of bed to pass urine, but the total quantity does not exceed three pints in twenty-four hours. His facial expression is haggard and somewhat anxious. His memory is not so good as formerly, and mental efforts are a great labour. These symptoms may have been in existence a year or more before advice is sought. The careful physical examination of this man fails to discover any evidence of organic lesion until his urine is

examined, when albumen is found, with a shedding of imperfect renal epithelium. The crystalline deposit, if any, will probably be the oxalate of lime. This condition may go on for years, and with but little variation ; and I now have a case, answering to the above, that has been under observation, without material change, so long as eleven years ; and I quote it as an instance of simple malnutrition associated with defective nerve-power.

For the most part, those who, in my experience, suffer from this form of disease, are men of middle life, of sanguine temperament, the subjects of depressing emotions, or upon whom unusual anxieties and responsibilities have heavily pressed. The resulting enfeeblement of health courts, if I may so speak, disease degenerative in character. That the more violent, though brief, disturbances of nerve centres powerfully affect the physiological function of the kidney, I am able, by the kind courtesy of my friend Dr. Moxon, to illustrate in the record of the following case. A gentleman under Dr. Moxon's care three months, whose urine had been repeatedly examined for albumen without results, was a few days ago, suddenly seized with a fit in the street, and brought to the doctor's house. Immediately after the fit, the patient voided urine, which on examination, was found to be loaded with albumen. In twenty-four hours, all trace of this had disappeared. There can be no doubt of the relations subsisting between the nerve-storm and kidney. If, therefore, such marked results as these can occur under brief, though powerful, nerve-influence, does it seem unreasonable or improbable that slowly destructive changes should follow the more silent influence of continuous nervous depression ? Why the nerves of the kidney in any particular instance should be prominently affected, must be determined by surroundings, if, in the present state of our knowledge, it can be determined at all ; but I have not yet learned why the branches of the fifth cranial nerve are more frequently painful than any other, unless it be urged that they are more exposed, which I do

not, however, accept as sufficient reason ; but if the theory of exposure be adcepted, then, *a fortiori*, will a nerve-sympathy and kinship be established between skin and kidney. It is important to remember, in actual bedside work, that long-continued functional disorder is very liable to lay the foundation of actual organic lesion ; so that when we have involved an organ essential to life, the early recognition of such disorder becomes a question of vital importance.

I think reason exists for a belief in the milder, though not less chronic, forms of Bright's disease, as being due to imperfect nutrition of renal cells ; not merely from the fact of disease continuing to be limited to cell-life, but from the absence of those secondary changes, which most frequently, within a comparatively limited period of time, occur as the result of a blood-dyscrasia.

I hope, at some future time, to follow up this subject by the record of cases in detail ; at the present moment, however, my object will be attained should I be able to engage professional attention in a new field of clinical inquiry. —*British Medical Journal.*

Jaborandi in Colds

A French writer suggests that we are now in possession of a medicine which is destined to render signal service in colds. It is jaborandi, which by its sudorific properties, and by its exciting action on the glands of the air passages and salivary glands, combines the principal pharmaco-dynamic effects that have heretofore been sought from various medicines. An effusion of one drachm of the leaves in a small quantity of water cor stitutes an efficieut means against colds, if taken early.

Painful points in neuralgia.

More than a score of years ago, M. Valleix, the distinguished author of the " Guide du Medicin Practicien," called attention to the frequency of vertebral *points douloureux* in neuralgia, and the necessity of directing the treatment to them. Prof. Duplouy, of Bourdoux, now pnblishes the particulars of three cases of neuralgia that resisted all other treatment, and eventaally rapidly subsided after the application of blisteis to these points.

CANADA

Medical and Surgical Journal.

MONTREAL, MAY, 1876.

A DOMINION REGISTRATION ACT.

It was in 1836 that Lord John Russell, with a view of redressing certain grievances of dissenting religious bodies, introduced and carried through Parliament, his bill for the "Civil Registration of Births, Marriages and Deaths. At the time the importance of this measure was not seen, but forty years experience has fully proved its value not alone from a legal aspect, but in being the commencement of a general system of sanitary reform in Great Britain. The Bill, as at first proposed, did not contain any provision for the registration of the causes of death. This, however, was inserted at the earnest representation of the British Association, presided over by Sir James Clark.

Out of this Act or engrafted on it has grown a national system of vital statistics. To Dr. William Farr was assigned the duty of superintending the compilation and publication of these statistics and after forty years of weekly, quarterly, and annual returns, he has collected a mass of reliable information on this subject, which is of the greatest practical use. Public interest is attracted to these reports as in a great measure they have led to an equitable system of Life Assursnce. The various tables of mortality indicate the average duration of life at a given age, so that life Assurance becomes no longer a speculation, but a safe investment not alone to the assured, but also to the Companies assuming risks. The benefits to be derived by a careful record of the vital statistics of any country are with-

out measure, the facts are incontrovertible, and point to the steady increase or decrease of the population.

In the supplemental Report recently published, the Registrar General of England gives the mortality statistics of the third deeade of civil registration. From this it appears that during thc 30 years ending in 1870 the population of England and Wales had increased by nearly seven millions, and that throughout that period the annual average death rate was 22 per 1000.

In his reports Dr. Farr, has urged that any excess over an annual mortality, of 17 per 1000 represents a condition of insanitation. We have thus far alluded to a few points in illustration ofthe benefits to be derived by a rigid system of Civil Registration, it is to our mind the starting point, the very central nucleus of any system of sanitary reform. Very much has been written concerning the death rate of our country, and very much of that of our City, and our mortality statistics are made to shew an unusually high rate as compared to the given population, but then how are these returns obtained, they do not bear inspection—all that can be learnt is the fact that a certain number of dead bodies have been sent for burial in our cemeteries, but whether all these persons died in the City of Montreal or not, does not appear. In the year 1860 we commenced the task of tabulating the mortuary returns with a view of ascertaining, if possible with accuracy, the death rate in proportion to the given population, but after working for months we gave it up as utterly useless and unreliable, and we maintain that the returns as at present collected are worse than useless, they are cruelly untrue they lead to misrepresentation, and place thc name of our city in a false light.

When Dr. Brouse moved in the Commons for the appointment of a select Committee to enquire into the expediency of asking legislation with a view to constitute a Bureau of Sanitary statistics, the Hon. the Premier of Canada in his reply stated that a very large portion of the City of Montreal was supplied with water from wells. It

was perhaps with something akin to wonder, that our City Fathers heard this statement, as we know that many of them regard our elaborate system of water supply as very near perfection. We can make every allowance for the Honorable gentleman, as he has given evidence of being no laggard in the field of research, and we feel convinced that a few hours attention to the question would have posted him on the subject, and that he would have overwhelmed the house with statistics be they ever so dry.

The time is fast approaching when these subjects will be forced on the consideration of our Federal Government, and what was recently an independant motion of an outside member, will we doubt not become a Government measure. Canada is sufficiently important as a country to adopt a definite policy on this subject. It is not a question for our Local Legislatures to deal with, but must be taken up and gone into by the Federal Government; it is a question in which the people of Canada as a whole, are interested and not the inhabitants of any one Province. To attain any results a uniform system of observation must be introduced, and we cannot do better than take as a model the English Act, which in many respects has been taken as a model by the larger number of the nations in the civilised world.

Our readers are aware that the Board of Governors of the College of Physicians and Surgeons of Lower Canada hold their semi-annual meeting in this city on Wednesday the 10th May, instant. At that meeting will come up for discussion the report of the Committee appointed at the last Triennial meeting, to draft certain amendments to our Act. A report is before the College which has already appeared in these columns, the following amendments to that report will be submitted, and we insert them to give our readers, and especially those of them on the Board of Governors, an opportunity of their perusal.

Amendments to the Act of Incorporation of the College of Physicians and Surgeons, L.C., to be proposed at the May meeting.

1st.—That the composition and mode of election of the Provincial Medical Board at present authorized by the Act of Incorporation of the Col-

lege of Physicians and Surgeons of the Province of Quebec, be not altered.

2nd. That section VII. of the Act of Incorporation of the College of Physicians and Surgeons, cap. xxvi, 10th and 11th Vict. be expunged.

3rd. That section V be thus amended:

The said Board of Governors shall be, and are hereby constituted "The Provincial Medical Board," in which capacity they shall meet *to receive the reports of the "examiners" hereinafter mentioned, and to perform the several duties devolving upon them under this Act as the Board of Governors of the College*, not less than *once* in each year, at such time and place as to them shall be deemed most fit, and on which occasions, seven shall be a quorum, for the transaction of business.

4th. That at the first regular meeting, of the said Board after the passing of this act there "shall be appointed by the Provincial Medical Board," for three years, subject to the approval of the Board, nine examiners, not Governors of the College, six of whom shall be of French and three of English origin, by whom all Candidates, for a license to practice medicine, surgery, and midwifery in this Province shall be examined, in accordance with the by-laws, rules and regulations of the Provincial Medical Board. The examination to be written and oral, and as far as possible practical.

Of the above examiners, one shall be chosen from each of the four medical schools, now existing in the Province, and the remaining five shall be chosen from amongst the registered Medical practitioners not connected with any of the Medical schools.

5th. That at the first regular meeting of said Board after the passing of this act there shall be appointed by the Provincial Medical Board for three years (subject to the approval of the Board) three persons actually engaged in the work of general education, to examine all persons about to begin the study of medicine, surgery and midwifery, on the subjects of general education hereinafter mentioned as belonging to the preliminary qualification of medical students, viz: One examiner of French nationality, resident in the city of Quebec, and one of French and one of English nationality resident in the city of Montreal. The subjects of the preliminary qualification to be English, French, Latin, geography, arithmetic, algebra, geometry and natural philosophy, and the candidate to present a certificate of good moral character.

6th. That every person wishing to obtain a license to practice medicine, surgery and midwifery in this Province, and to be registered under this act, and who shall not have obtained a license to practice medicine, surgery and midwifery in any of the provinces of the Dominion of Canada before the expiration of six months after the passing of this act, shall, *before being entitled to such license* and to *registration* in this province, *possess a degree or diploma* from a Canadian university or college, or incorporated medical school, approved by the Provincial Board, *and pass an examination* as to his knowledge and skill for the efficient practice of

medicine, surgery and midwifery, *before the examiners appointed by this Board;* and upon passing the examination required, and proving to the satisfaction of the examiners that he has complied with the rules and regulations made by the Provincial Board, and on payment of such fees as the Board may by general by-law establish, such person shall be entitled to a license to practice medicine, surgery and midwifery in this province, and to be registered, and, in virtue of such registration, to practice medicine, surgery and midwifery in the Province of Quebec. Provided, always, that when, and as soon as it shall appear that there has been established a central examining board, similar to that constituted by this act, or an institution duly recognized by the Legislature of any of the Provinces forming the Dominion of Canada, other than Quebec, as the sole examining body for the purpose of granting certificates of qualification, and wherein the corriculum shall be equal to that established in Quebec, and the holder of such certificate shall upon due proof be entitled to registration by the Provincial Medical Board of Quebec, if the same privilege be accorded by such examining board or institutton to those holding certificates in Quebec: Provided, also, that it shall be *optional* for the Provincial Medical Board to admit to registration all such persons as are duly registered in the medical register of Great Britain, or are otherwise authorized to practice medicine, surgery and midwifery in the United Kingdom of Great Britain and Ireland, upon such terms as the Provincial Medical Board may deem expedient.

That the "Provincial Medical Board:—

(1). Shall from time to time, as occasion may require, make rules and regulations for the guidance of the "Examiners," and may prescribe the subjects and mode of the examinations, the time and place of holding the same, and generally may make all such rules and regulations in respect of such examinations not contrary to the provisions of this act, as they make them expedient and necessary,

(2). It shall regulate the study of Medicine, Surgery and Midwifery by making rules with regard to the preliminary qualifications, duration of study, and curriculum of studies to be followed by the students.

Provided always that such rules shall not be contrary to the provisions of this Act,—and that any change in the curriculum of studies fixed by the Board shall not come into effect until one year after such change is made.

8th. That the Provincial Medical Board shall have the power to fix by law the salary or fees to be paid to the "Officers," and to the "Examiners" adpointed by the said Roard; as well, also, the fees to be paid by all candidates entering on the study of medicine, as also by all candidates for the license to practice medicine, surgery, and midwifery, as well as the fee to be paid for registration, and the said Board may dispose of all fees received in whatever manner they may think most conducive to the interests of the College.

McGILL UNIVERSITY MEDICAL FACULTY.

SUMMER SESSION.

It is with great satisfaction that we are enabled to announce an extended summer course in connection with McGill University Medical Faculty. For several years past, regular clinical instruction throughout the summer months has been afforded students in the wards of the Montreal General Hospital. To make these more useful and attractive, and with a view of rendering clinical instruction more than ever a characteristic feature of the teachings of this school, the Medical Faculty gave a special course of clinical instruction during the summer months. open to all matriculated students free of charge.

This will be found in the announcement of the Medical Faculty for the year 1870. The summer session of 1876 has been rendered more attractive by several additional workers. Besides the usual clinical instruction at the bedside, Dr. Ross will deliver a course of lectures on Physical Diagnosis. Dr. Roddick takes up the subject of Minor Surgery, and gives instruction on the uses and employment of surgical apparatus. Dr. Gardner discusses electro-therapeutics and the practical uses of electricity in disease. Dr. Frank Buller, who comes fresh from the Royal London Ophthalmic Hospital, Moorfields, where he has enjoyed unusual opportunities, as Resident Surgeon to that institution during the past three years, will deliver a course of fifteen lectures on Diseases of the Eye, giving at the same time instructions in the use of the ophthalmoscope, with practical demonstrations of intra-ocular lesions. Dr. Girdwood delivers his course of practical instruction in Chemistry, this forming a part of the required curriculum the student has the option of attending this course during the summer months. And last, though not least. we have Dr. Osler, who is an enthusiast in his department, who will give a course of twenty-five lessons on Practical Histology, and also a course of Practical Pathological Demonstrations

in the post-mortem room. In giving facility to students to follow up their studies during the summer months, these gentlemen are giving much valuable time, and we trust their exertions will be appreciated by the pupils. We understand that a large class is expected. We give below a schedu'e of the work.

SUMMER SESSION, 1876.

—o—

DR. DRAKE.— DR. MCCALLUM — DR. GODFREY.—	Clinical instruction daily at bedside in Montreal General Hospital A limited number of Dresserships and Clinical Clerkships may be obtained on applying to the out-door and attending Physicians.
DR. ROSS.—	Physical Diagnosis.
DR. RODDICK.—	Minor Surgery. Application of Bandages and Splints. Surgical Anatomy on the Cadaver.
DR. GARDNER.—	Electro-Therapeutics; the practical application of Electricity in disease.
DR. BULLER.—	A course of fifteen Lectures on diseases of the Eye, including instructions in the use of the Ophthalmoscope and practical demonstrations of Intra-ocular Lesions.
DR. GIRDWOOD.—	Practical Chemistry, including Blowpipe manipulations, qualitative analysis, toxicological investiga ions, &c., &c. Fee, $12.
DR. OSLER.—	Practical Histology—Normal and Pathological. A course of twenty-five lessons. Microscopes, re-agents and material provided. Fee, $15. (To be devoted, after paying necessary expenses, to Physiological Laboratory Fund.)
DR. OSLER.—	Practical Pathology—a course of twenty demonstrations in the Post-mortem Room.

All the Lectures and Demonstrations will be free with the exception of the Practical Histology and Practical Chemistry courses. The latter forms part of the curriculum and may be taken by students either in the Winter or Summer Sessions.

The Session will begin on May 1st and continue three months.

For further information apply to

THE REGISTRAR.

SIR GEORGE DUNCAN GIBB, BART.

We annouuced the death of this gentleman in the March number of our periodical, and we think that as an old fellow-student and graduate of McGill University,—one whose intimacy, we might almost say affection, remained with us to his dying day—something more than a passing obituary notice is required from us.

George Duncan Gibb entered as a student of medicine at McGill University in the autumn of 1842. After pursuing his studies uninterruptedly for four sessions, he graduated in May, 1846. The year before he graduated he received the appointment of Resident Apothecary to the Montreal General Hospital, which position he retained up to the spring of 1847, when he left for Great Britain, selecting Dublin as the school at which he proposed to follow up his professional studies. Early in the year 1848 he passed the examination for the License of the Royal College of Surgeons, Ireland, and also that for the License in Midwifery. Shortly after passing the College of Surgeons he repaired to Paris, and was in that city a week or so after the eventful days of June of that year. Whilst in Paris he prepared a paper on gun-shot injuries, illustrating it with cases of gun-shot wounds which he observed in the various Parisian hospitals. This paper he read before the Parisian Medical Society, which procured for him the honour of election as member of that Society. This paper, which is very interesting, may be found in the fourth volume of the *British-American Journal*, page 150. Europe being much disturbed, politically, at that time, he did not prolong his visit to the Continent, but returned to England; and on the 12th February, 1849, he took ship at Liverpool and sailed for New York. He arrived in Montreal some time in the month of March following, and forthwith commenced the practice of his profession in this city. Always industrious and with a keen desire to record all that appeared to him of interest, on the passage to this country he made accu-

rate observations on the diseases and accidents which occurred amongst the crew and passengers, being an aggregate of 369 souls, during a lengthy passage of 36 days. This formed the subject of an interesting paper, which was published in the fifth volume of the *British-American Journal*. In this paper will be found suggestions as to the daily amount of food required for steerage passengers, and also the accommodation necessary—as at that time, and even in our day, the holds of vessels were disgracefully over-crowded; the subject of the necessity of ventilation of passenger vessels as a sanitary measure is dwelt upon. Altogether, this is a thoughtful and well-arranged paper. In the year 1851, Dr. Gibb, with several other medical gentlemen of this city, established the St. Lawrence School of Medicine, and during the ensuing winter session he delivered a course of lectures on Institutes of Medicine in connection with that school. This school survived one session, and its cessation cannot be attributed to any other cause than a want of scope. Already there existed two medical schools in Montreal, both struggling for bare existence, and it was found that to continue the work of the St. Lawrence School could alone be done by considerable personal outlay. The following year, Dr. Gibb determined to leave this country and settle in London. In 1855 he was appointed Reporter to the London *Lancet*, which position he held for upwards of ten years.

But while devoting much of his time to hospital reports he continued to work earnestly, and became a regular contributor to Canadian medical and other periodicals. There is not a single volume of our own medical journal which does not contain something from his pen. Literary labour was to him a pleasing recreation, and during his sojourn amongst us we never remember to have seen him idle. Go to his office when you would, he was to be found ever at his desk engaged in some literary pursuit. His style was clear, indulging occasionally a little in the imaginative, but what he did write gave evidence of careful research and

accurate observation. Of his career of late years we know nothing personally, but the record is to be found in the *Medical Directory*. He was M.A., M.D., C.M., McGill University, 1846; L.R.C.S.J., and Licentiate in Midwifery, 1848; M.R.C.P., London, 1859; Fellow of the Medical Society, also Medico-Chirurgical and Anthropological Societies of London; Member Pathological Society, of the British Medical Association, and many other societies on this continent and in Europe; Fellow of the Geological Society, &c, &c.; L.L.D., conferred by the University of Laval, Quebec, in 1864. To be a member or fellow of a literary society was not sufficient for Dr. Gibb, and on reference many of the transactions of the above-named societies will be found to contain contributions from his pen. But besides writing occasional papers, all of worth and interest, he found time to collect his views into book form, and published a treatise on Whooping Cough; also a *brochure* on morbid states of the urine, and a work on Diseases of the Throat and Windpipe as reflcted by the Laryngoscopi. He translated "Czermak's Work on the Laryngoscopi" for the New Sydenham Society, and subsequently published "Observations on Diseases of the Hyoid Bone," and also "The Laryngoscopi in Throat Diseases." This, we believe, gave him a widespread name both at home and abroad, and the wheel of fortune seemed to have turned in his direction, but unfortunately he left the beaten track he had so far trod well, and devoted the remaining years of his life in seeking after a bauble which, when found, was worthless. Had the empty title to which he laid claim carried with it a few broad acres, we could then understand his striving for its possession. But it was a false step, one which we verily believe he himself regretted. It, in a great measure, cut him off from all that was congenial to him as a scientific enthusiast, and rendered him misanthropic and taciturn. It was a weakness of charaeter deplored by his truest friends, and ridiculed by those not his equals in capacity. In connection with this assump-

tion of a title, he published a work in two volumes on "The Life and Times of Robert Gib, Lord of Carribber, Familiar Servitor and Master of the Stables to King James V. of Scotland," with notes of his descendants who held offices of trust near the person of the Sovereign in the reigns of Queen Mary, James VI. of Scotland and I. of England, and Charles I., compiled from the Pubiic Records; London, Longmans, Green & Co., 1874. This is somewhat dry reading, as it refers chiefly to family matters, of interest no doubt to many; but, besides dry matters of personal history, there are many circumstances and facts of an historical character interspersed which add somewhat to the general interest of the book. This portion of his career we must close, with sincere regret that it should have ever become our duty to record. One of the last papers he contributed to medical science was entitled "Division of the Isthmus to relieve Dyspnœa in Certain Cases of Bronchocile." This article will be found in the *Lancet* of January 23rd, 1875, page 120. His suggestion has been favorably received by the profession. Some time in April, 1875, he was attacked with what appeared to be pleuro-pneumonia of the left lung. From this he never entirely recovered. Serious changes occurred: the right lung and liver became engaged in the disease, and he finally sank, and died on the 16th February ultimo, at the age of 55 years.

A MODEST REQUEST.

We observe that at a recent meeting of the Health Committee, presided over by His Worship the Mayor, a most modest demand was made by Dr. George Baynes, who, according to the newspaper report, requested to be appointed with authority to publish an eight-page monthly journal strictly devoted to health matters; and further, that a remuneration of $300 be given for that purpose. We think that if the Corporation of the city of Montreal are going into the printing business, they had better adopt the usual course and advertise for tenders.

CANADA
MEDICAL & SURGICAL JOURNAL.

ORIGINAL COMMUNICATIONS.

Case of Acute Fibrinous Bronchitis, with Expectoration of Tube Casts. By E. D. WORTHINGTON, M.D., of Sherbrooke, P.Q.

On the 11th of January last I received a very urgent telegram, asking me to meet Dr. McGowan, at Bolton. The patient, Mrs. R—, wife of the Superintendent of the Huntington Mine, is an English woman 41 years of age, well-formed, and above the average height. She is the mother of thirteen children, the youngest being only three months old. She has had all the diseases of childhood, including Hooping cough, and on two occasions suffered from some affection of the lungs which she describes as being of an inflammatory character, and which she thinks her doctor in Devonshire called Pneumonia. With the exception of the above ailments she has enjoyed uninterrupted good health, and been singularly free from cough, or other indication of lung disease. Some of her relatives however, on the mother's side, died of phthisis.

Dr. McGowan's history of the case is as follows:—the extracts quoted being from his notes. When first seen by him on January 7th, "the pulse was 98, respiration 25 and laboured. On examination by stethoscope found the lower lobes of both lungs in a state of engorgement. Ordered sinapisms over the whole chest, and gave liq. ammon. acet. with antim tart. every four hours, alternately with minute doses of morphia and ipecac." "The symptoms remained about the same until the 10th, when

there was some improvement, pulse 88, resp. 21, dulness has disappeared. Gave the following mixture:

Syr. Scillæ comp. ℥iv
Ammon. Muriat ℥ii
Potassii. Cyanid griii
Sol. Morphiæ Muriat ℥iii
Extr. Glycyrrhizæ ʒvi
Aquæ ad ℥iv

A tea spoonful every four hours.

On the evening of the 10th, I noticed the tube casts for the first time."

It appears that on the evening of the 10th, Mrs. R. was suddenly seized with most alarming symptoms of suffocation, constriction and pain within the chest, particularly on the left side, attended with great distress, countenance and skin livid, dyspnœa, and violent paroxysms of coughing, which ended in her coughing up a quantity of what ultimately proved to be fibrinous tube casts of the bronchi, equal in bulk to about a large table spoonful, when washed from the accompanying catarrhal expectoration. The sputa were at first, and only at first, very slightly tinged with blood, and a few blood points were observed on some of the tube casts. In a few hours another paroxysm of coughing ended in more expectoration of tube casts, the disappearance of cyanosis, and most marked relief to the patient.

When I saw Mrs. R. near midnight of the 11th I had the consolation to find—after my lonely drive of 30 miles—the patient wonderfully calm, breathing quietly, suffering no pain, and anxious only as to the significance of the beautifully moulded bronchial trees, which had appeared "in such questionable shape" and which were carefully preserved in a bottle of water for my inspection. To her, and her husband, they were ominously suggestive of bronchial tubes! and though I had never seen tube casts before, having only read descriptions of them, I was happy to be able to corroborate, much to the patient's peace of mind, Dr.

McGowan's assurances that they were only casts of the bronchial tubes and not the bronchial tubes themselves!

Some of the larger specimens had a diameter at the base of fully three-eighths of an inch, they were distinctly cylindrical, of a clear white, or perhaps pearl color, with here and there very minute and delicately coloured pink points.

One of the specimens I sent to Dr. Howard was, when fresh, a particularly fine one. In an ordinary Quinine bottle of water it floated with its top turned downwards, reaching from the cork to the bottom of the bottle, branching out on each side, and representing a perfect white gem of a tree. That one had, at first, twenty-eight terminal branches, and

was at least four and a half inches in length. The wood-cut represents the actual size of one of the largest casts. I have to thank my friend Dr. A. A. Browne for the very careful sketch from which it was taken.

Perhaps I should say something upon the physical signs, on examination of the chest; but really on this point there is nothing to relate. The patient was better when I saw her, and beyond a carefully prolonged act of inspiration and expiration, as if fearful of inducing a paroxysm of coughing, and slight crepitation, circumscribed, in the posterior and lower part of the left lung, I could detect nothing abnormal.

The chest was clear and resonant throughout, except at this circumscribed spot; and the respiratory murmur was perfect. Only a short time before I arrived a free expectoration of casts had occurred.

I may mention here that all the children in the house had been suffering from Hooping cough for several weeks. There was not, at any time, in the case what could be called Hæmoptysis; only a few of the tubes had blood points, and a few times, early in the case, the mucus coughed up with the casts, was tinged with blood. Beyond this there was no hæmorrhage; a circumstance rather unusual, I believe, in such cases.

I used above the word 'quantity,' to mark the amount expectorated, but will be a little more definite. Dr. McGowan had saved five or six magnificent specimens for himself, as well as some broken ones; beside these I was shewn a large pickle bottle containing upwards of twenty casts, measuring each from two to five inches in length.

All these had been coughed up before I saw the patient.

On the 20th April I saw Mrs. R., as she passed through Sherbrooke, on her way to England, but only for a few minutes. She had no cough or other evidence of lung affection. She told me that she had coughed up casts, in greater or lesser quantity, every day, up to near the end of March. Her estimate and that of her husband, as to the

quantity, was that when carefully washed from all mucus, *the casts themselves* would more than fill an eight ounce bottle, an estimate in my opinion much within the mark. They were carrying with them some remarkably fine specimens to England.

At no time during Mrs. R's illness, did her cough,or other symptoms, present the slightest resemblance to Hooping cough.

Pseudo-membranous, Croupous, or Fibrinous Bronchitis, Bronchial Polypi, Bronchial Croup, Plastic Bronchitis, &c., is, according to Riegel, "as a genuine, primary form of disease, *a very rare affection, and one which occurs more frequently in the chronic than in the acute form.* Its occurrence is so infrequent that even in large hospitals years and decades may pass before a single case of the kind comes under observation. Of acute, fibrinous bronchitis, with fibrinous expectoration, Lebert could find but seventeen observations, after a careful analysis of all the cases known at the time of writing."

Very many of our standard works on medicine make no reference to it, as a 'genuine primary form of disease,' or indeed allude to it either in its acute or chronic form, and I have diligently looked over Braithwaite from the first to the last number, without finding one single case reported. Tanner devotes about half a page to the subject, under the head of 'Plastic Bronchitis;' but it is evident that his remarks all point to a chronic form of the disease.

Watson in his Lectures, says: "Inflammation of these mucous membranes is, however, sometimes attended with the exudation of something which is very like coagulable lymph. The tracheal, bronchial and pulmonary membrane, the œsophageal, the intestinal, and that which lines the uterus, are all more or less subject to the formation of adventitious membranes under inflammation. Casts of the smaller branches of the air tubes have, in rare instances, been coughed up in large quantity; constituting what have been very inaptly called *bronchial polypi.* The

membranous exudation of croup is well known, a tubular substance is formed in the trachea, and sometimes fortunately expelled; but too often it suffocates the patient." In another place "I mentioned in a former lecture that the false membrane of croup sometimes descends a long way into the bronchi; even to their extremities. But I am speaking now of a different and less acute form of the disease, in which the *trachea being unaffected*, concrete masses, evidently moulded in parts of the hollow bronchial tree, are spat up; somewhat like bunches of worms, or the branching roots of a small plant. This I presume to be uncommon, for I have met with it *twice only in my life.*" Doctors Warren and Paris, Mr. Worth and Sir R. Carswell, are then referred to as having met with cases, but they are apparently all of the chronic form. Watson's cases of the two brothers, the Barrister and the Professor, are very interesting; each attack in both cases being preceded by hæmoptysis. It is clear that in both cases there was a persistent congested state of the mucous surface of the bronchi, and that both were of a purely chronic character. Perhaps it would not be venturing too far to suggest that as a rule chronic cases are attended by free hæmoptysis, and that only a trace of blood attends the acute form of the disease.

By far the most complete treatise on fibrinous or croupous Bronchitis is that by Dr. Riegel of Cologne, in the 4th vol. of Ziemssen; the prefatory remarks to which, state that hardly any individual observer is in a position to acquire great personal experience, on account of its general rarity, and that of 58 cases worked up by Biermer, two only occurred under his own observation.

Biermer includes under the above name, "only those cases in which the croupous process is limited to the bronchi or has taken its starting point in these tubes." "Those observations in which the croup extended from the larynx to the bronchi are not included, nor those in which casts are formed in the bronchi during the progress of a croupous pneumonia" But he takes into consideration "the second-

ary bronchial croup," which is sometimes observed as a result of chronic affection of the lungs, tuberculosis for example.

Lebert also excludes those cases in which the fibrinous bronchitis is a continuation of fibrinous laryngitis; but includes cases in which casts have formed in the bronchi in the course of croupous pneumonia.

The article, however, adopts Biermer's division, namely, that which *commences primarily in the bronchi.* The disease is named fibrinous bronchitis by Lebert, "because the fibrinous nature of the inflammatory product constitutes its chief characteristic; the fibrine, in this affection, exuding as such from the bronchial capillaries, or the pulmonary capillary vessels, in company with the white corpuscles, or perhaps escaping as fibrinogen which promptly coagulates on exposure to air."

Among the predisposing causes to fibrinous bronchitis, Riegel, while confessing that we have not sufficient data for statistical purposes, inclines to the belief that it may be induced by the daily variations of the temperature, at particular seasons, which give rise to bronchitis and pneumonia. When the case of Mrs. R. occurred, cases of pneumonia and Hooping cough, were very common in Bolton, and the neighboring townships; but it would be very difficult to connect the Hooping cough,—even as an exciting cause—with the croupous bronchitis. Riegel,in describing the *acute* form says: "The disease may begin in the form and manner of an ordinary acute catarrh, with slight fever, more or less dry cough, feeling of oppression on the chest, loss of appetite, increased thirst, and similar symptoms. *After these catarrhal symptoms have existed for some days, severe symptoms occur more or less suddenly,* including intense dyspnœa, increasing to manifestations of suffocation, active febrile movements, dry harsh cough, usually without any or with scanty expectoration, severe oppression and feeling of anxiety, *sometimes even slight hœmoptysis.*" Then, with a painful sensation of oppression in the chest, and dread of suffocation, comes the characteristic fibrinous expectora-

tion. The casts are either coughed up in a round ball, surrounded with a little mucus, or they are enveloped in a considerable quantity of catarrhal, purulent, or sanious sputa.

It is quite evident that even the most carefully conducted physical exploration will never succeed in detecting the existence of bronchial croup, as such, even in the severest cases. It is only when the fibrine cast appears that the nature of the disease is positively known. *Percussion* of the chest gives no prophetic sound, but the *respiratory murmur* is absent over all bronchi filled up by casts. There is no respiration there at all. "Hence it may be considered as a somewhat characteristic trait of this affection that while on the one hand the percussion tone is full and clear, the respiratory murmur, on the other, is absent."

When the expulsion of the fibrinous mass is complete the agony is over; the feeling of impending suffocation is gone; the dyspnœa, paroxysmal croup, and other distressing symptoms disappear, and the sufferer all at once experiences a degree of comparative comfort, but alas, only until fresh casts have again been formed. Then the routine of suffering and comfort alternates until recovery or death ends the case.

"The prognosis is in general doubtful in acute cases," about half of them dying. "On the other hand, the prognosis of chronic bronchial croup is much more favourable," according to Watson, "the complaint is not a dangerous one; and when death occurs during its progress, the fatal result is due to some disease of which the membranous exudation is merely a complication." A favorable prognosis may of course be given with more confidence if the patient either in the acute or chronic stage has already gone through the ordeal of expectoration of casts; age and constitutional vigor being considered.

According to Riegel, the indications as to treatment are, *first*, to remove the fibrinous masses present in the bronchi; *second*, to prevent their reproduction. The *first* is to be accomplished, if possible, by the time honored administra-

tion of emetics. The choice of emetics being "the recently introduced and amply tested Muriate of Apomorphia" which by subcutaneous injection "acts very promptly, is always certain, and is free from attendant unpleasant effects." Inhalations of lime water, lactic acid, carbonates of the alkalis, and hot water vapor are specially recommended. The *second*, viz., to prevent the recurrence of the attacks.

When the croupous bronchitis has developed in connection with an acute or chronic bronchial catarrh, *attack the bronchial catarrh*, and in addition avoid all sources of injury which experience has shown to give rise to bronchial catarrh. Finally Riegel sums up by stating that "there are no remedies, as far as is at present known, which are competent to prevent the recurrence of the attacks with any degree of certainty.

It is with a view of ascertaining the minute structure of the casts, that Dr. Osler has made a number of transverse sections, and I submit his report: "Each cast consists of a variable number of laminæ arranged concentrically, those in the centre being much folded and involuted. Under a magnifying power of 500 diameters the laminæ are seen to be translucent, structureless membranes, while the spaces between them are filled up with fine fibrils of fibrin, and innumerable leucocytes."

Sherbrooke. May 20th, 1876.

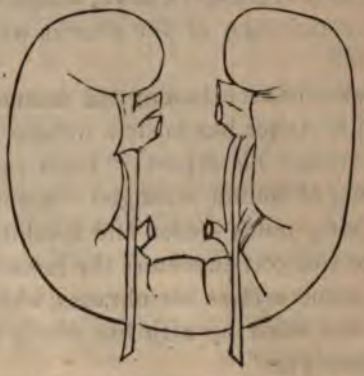
Horse-shoe Kidney. By J. D. CLINE. B.A. M.D.,

(Shown at the Medico Chirurgical Society.)

William Harrison, aged 35, was admitted into the General Hospital in January, 1876. There were evidences of commencing softening in the apices of both lungs. He was an extremely nervous man, when spoken to or examined he would turn pale, and tremble, and the action of his heart would become very tumultuous, the pulse running up to 150 or 160 beats in a minute. The softening of the lungs progressed very rapidly. There was elevation

of temperature constantly. He died on the 10th of April.

At the Autopsy we found a large number of small cavities in both lungs, and the intervals between the cavities stuffed with tubercle. The left ventricle of his heart was slightly hypertrophied. We found the following malformation of the kidneys. The two organs were fused into one mass, horse-shoe in shape, with the convexity downwards, the bond of union lying over the spine. The ureters passed down *in front of the kidney*, the left one opening into the left mass by three canals, the right one into the other side by one. There were but two renal veins, one for each side, opening into the upper part of



each hilum; and two arteries for each side, those opening into the upper part of the hilum arising from the aorta in the usual situation, the others arising from the aorta below the spermatic arteries, and entering the hilum at its lower part. On section we found a distinct pelvis for each side. The union consisted of true cortical structure, of the usual depth, along the concavity, while the rest which was the greater part of it did not appear to be pyramidal structure. The hilum of the left side was very much to the front. On looking up the literature of this malformation of the kidney I can find very little. In the transactions of the Pathological Society of London for 1862 Dr. Gibb describes a case which was affected with Bright's disease,

and mentions as being found in the London Museum at that time 19 specimens.

Wilks and Moxon in their Pathological Anatomy speak of it as very rare. The specimens differ slightly in the number and disposition of the arteries, veins and ureters. The ureters generally pass down behind the kidney. The convexity of the horse shoe is always downwards. One case is mentioned where the union was by fibrous tissue rather than glandular structure. I think in this specimen the greater part of the union is glandular. Dr. Browne has kindly given a drawing which shows the peculiarities of the malformation.

Convulsions, their Nature and Treatment. By WILLIAM FULLER, M.D., C.M., Professor of Anatomy, University of Bishop's College.

(Read before the Medico-Chirurgical Society, Montreal.)

GENTLEMEN,—There are few circumstances more trying to the physician than the management of a case of convulsions, especially to one who has just commenced his career of practice, armed as he may be by knowledge acquired from lectures and books, but yet doubtful through want of experience of the practical application of the means which he has been taught to use. Regarding the suddenness of the call, the great anxiety of the parents, the frightful aspect of the patient, and the apparent necessity of immediate action all conspire to disturb that equanimity of mind necessary for correct observation and sound judgment.

In studying the physiology of convulsions I have come to the conclusion that they result from an anæmic state of the nervous centres produced by spasms of the vessels through irritation of the sympathetic nerve from local disturbance in some part of the organism, or from an insufficiency of blood in the vessels, as in case of excessive hæmorrhage, or perhaps from an altered state of that fluid from the poison of the eruptive fevers, or strychnine, &c.

A spasm is either local or general in the organs of the mind, producing irregular trains of thought, hysteric emotion, or depraved irresistible appetites. In the spinal cord, producing general or local pain, or spasms in the body. In the vascular system of the body producing the general chill which precedes a fever, or local anæmia as in cold hands and feet, and what nervous patients describe as dead fingers. These and many other conditions have their origin in spasms of the arterial system shutting off the supply of blood to nervous centres or to parts of the body—they are similar in nature and call for similar remedies. They sometimes replace each other, and are beyond the control of the patient's will. The irregular circulation in the organs of the mind produced from excentric causes, is a subject well worthy the study of the theologian, the moralist and members of the legal profession whose mental philosophy studied from consciousness, seldom recognizes the groundwork of that science in physiology, hence it is with the one the wrong-doer is wicked, and the other condemns him as a criminal. How few recognize that great essential, " a sound mind in a sound body."

This is the explanation of the different views taken of cases in our criminal courts by the bench and the doctors. Let us continue at the risk of being the subjects of derision to testify when our conscience dictates, in the interests of mercy, and let the same understanding make us charitable toward all men. We are, however, seldom called to treat these cases until some unfortunate is ripe for the lunatic asylum, or on trial for his life.

We will now consider the nature and treatment of spasms affecting the bodily organs. The phenomena of a chill, is that a local or general irritation of the sympathetic causes spasms of the arterial coats and unstriped muscular fibres generally, shutting off the supply of blood to the skin producing a sensation of coldness and cutis anserina. The heart beats violently to overcome the obstruction. Paralysis soon follows the expenditure of nervous force, and the capil-

laries become distended with an overflow of blood which is the phenomenon of simple fever. Nature's object in this is to relieve a local congestion by withdrawing the blood to other parts of the body and thus equalize the circulation. All parts of the body now start from equal conditions to tone up their vessels, and if this process obtains equally throughout the body there is a continuous recovery; but if on the other hand the part primarily affected fails to keep pace with the rest of the body,after a certain time it is necessary to repeat the process, which probably is the cause of the periodicity of certain diseases, as intermittent fever, periodical pains, periodical drunkenness, or insanity of any kind. In low fevers the chills are slight, owing to the depressing or paralyzing influence of the poison, hence the dusky appearance of the skin, its sluggish circulation, and the bluish and long continued congestion remaining after the application of mustard, in typhoid fever, &c. The same conditions in the nervous centres,produce the sluggish comprehension and the nervous symptoms observed in fevers.

Convulsions frequently follow or take the place of chills, especially in children, a fact which proves their close relationship. Now what are the facts from which we can form a just conception of the nature of convulsions, and can we draw a comparison between them and chills? I think we can prove them to be identical. Let us observe closely the phenomena of a convulsion. 1st. There is variableness of the temper, fretfulness, excitement, frequently the child sings just before, and the joyous mother is suddenly transported into grief by the unexpected change. The face is observed to be alternately pale and flushed, irregular patches are seen, travelling spots of redness. The pupils alternately contract and dilate. There are frequent starts out of a restless sleep from dreams, rolling of the eyeball, twitches in different parts of the body precede the general convulsion which is unequally distributed, and generally follows a successive course over the body, repeated in the same order in each subsequent convulsion, sometimes affect-

ing only one side, which side is generally semi-paralyzed after the attack. Each convulsion is followed by a state of congestion of the face, and more or less profound unconsciousness. Now what is the signification of these phenomena—doubtless they are the result of irregular circulation produced as in chills, by irritation of the sympathetic and irregular contractions of the vessels until the maximum contraction is reached in the convulsion, which is followed by dilation of all the vessels, and congestion of the nerve centers, which is the cause of the unconsciousness, and of the cessation of the spasmodic action. Excessive hemorrhage produces convulsions, owing to a deficiency of blood supply, fainting fits are frequently accompanied by or pass into convulsive movements. The object here to be attained by nature is, by the temporary spasm of vessels leading to the nervous system, to paralyze those vessels in order that while the body which may remain prostrate without a fatal result, those parts which are necessary to life, may be more abundantly supplied until the vital fluid is replenished. Farther with a view of testing these ideas I have observed in the slaughter house that spasms occurred in the animals only when they were nearly bled out, and I further caused two calves which I selected as nearly equal as possible, one to be suspended by the legs and the other laid on the floor with its head elevated, they were both bled as nearly alike as possible, and as I anticipated the one on the floor was convulsed much sooner and much more than the one suspended, showing that while anæmia favors, congestion of the brain opposes, general convulsive movements. Again, compression of the veins of the neck is said to control a convulsion ; however, I have not met with success through inefficient performance as it is scarcely practicable in the presence of friends. The exciting stage of anæsthetics appears to be of the nature of a convulsion and the second stage resembles the congestion subsequent to it. This is probably the action of these drugs on the body and their use in convulsions by keeping the vessels in a state of

paralysis. If these conceptions of the nature of convulsions are correct it follows that beside removing the cause, if possible, they may be controlled by such remedies as either produce tone in the primary part at fault by very *small* and *repeated* doses of some medicine acting *directly* on that part, or by a large dose of some medicine sufficient to cause paralysis of the whole vascular system. Unfortunately it is difficult to make a correct diagnosis of the cause, or in the present state of our knowledge of materia medica exactly to adopt a medicine to use in this manner. Again, we are seldom called until the spasms are developed, consequently we are obliged to adopt those measures which give relief speedily to the urgent symptoms. The latter course is one which we may adopt with almost certain success, and as is seen in a study of the disease, it is not contrary to the efforts of nature herself, hence the use of anadynes and anasthetics is appropriate in doses sufficiently large to produce paralysis of the cerebral vessels and congestion.

Of the use of chloroform, chloral, bromide of potassium, warm baths, bleeding, &c. we are all acquainted. Perhaps nitrate of amyl might be useful on the same principle. I have no experience, but it appears to produce cerebral congestion very quickly, I think that it deserves a trial. Of all remedies I am most in favor of opium, and so much confidence have I in this remedy, which I have used for six years, that I rarely think of anything but my hypodermic syringe when I am called to a case of convulsions. The few unsuccessful cases which I have had, have not shaken my confidence in this remedy. I introduce the hypodermic syringe, loaded with three or four doses, and slowly inject at intervals of twenty minutes or ½ hours, until the pupil begins to contract. As soon as I find the pupil contracted I go home, confident that the spasms have ceased, at least until the influence of the medicine has passed. I have adopted this treatment in infants two or three months old with perfect success, and without any mishap. If infants

are more susceptible to opiates, they require less, and of course the treatment is not responsible for a want of caution. I have observed that if the pupil failed to contract after a reasonable dose of the opiate, the case is unfavourable, and in six cases which occurred to me, all died either from recurring convulsions or of meningitis, and here it may be objected that the opiate was contra-indicated in, or might produce inflammation of the brain, or meninges, but I am of a different opinion, and that opium is no more contra-indicated than any of the above named remedies, except perhaps the warm bath and bleeding, since the others produce the same result as the opium or the fit itself viz: congestion of the cerebral vessels. I think for certain reasons that cerebral difficulty is already established in those cases where the pupil refuses to contract, and from observation on a recent case, and a successful one which I saw before, I believe that leeches should be employed at once in cases of this kind.

Let me say a word about removing the cause. I think we should not be in too great a hurry. I have known a child to be in imminent danger of strangulation after an emetic, by vomiting while in a fit and drawing a piece of apple into the larynx during an inspiration; also to purgatives I am strongly opposed as adding another irritation to that already existing. I never give a purgative in threatened convulsions without first administering an opiate in order to leave room for the additional irritation.

It remains to say a few words about puerperal convulsions. Do they they differ in their nature from other convulsions? I believe that they do not only in this; that we know their cause to be congestion of the kidney, and since the kidney is so important an organ, when its functions are disturbed nature makes most strenuous efforts for relief. The same remedies on the same principle are useful in these as in other convulsions. I have injected morphia in ½ grain doses while the patient was in the convulsion and also during the stertor that followed with uniform benefit, in

all preventing a recurrence for several hours. One case died on the third day. She was convulsed before labor began and was unconscious for the most part until she died. The urine became semi-solid on boiling and remained so during the whole period.

I saw one case where veratrum viride appeared to produce a very decided effect. This case occurred in the Lying-in Hospital during my studentship, about twelve years since. It was under the care of the late Dr. Hall. The convulsions in this case occurred at intervals of about 20 minutes and had lasted about twenty-four hours. Chloroform had been administered without much apparent benefit, and the case was considered hopeless,—such was the word sent to her friends. It was observed that just before a convulsion the pulse rapidly rose to 140 or more, and fell after the spasm had ceased, it occurred to us that if the pulse was reduced it might be some benefit; so considering that the girl was of a robust constitution, and that it might be some time before the Doctor returned, we took it upon ourselves to prescribe. Accordingly, we gave 4 drops of the fluid extract of veratrum viride, and two more in half an hour. The pulse was reduced to about 80, and I think it was about an hour when the spasm, ceased and did not return. The girl made a steady and good recovery, which under the circumstances was attributed to chloroform. My impression at the time was that the medicine lessened the flow of blood to the head by diminishing the force of the circulation, but I think now, that like nausients, it diminished the arterial tension, by paralyzing the unstriped muscular fibres, and favoured passive congestion. I am not inclined to believe in the uræmic theory of puerperal convulsions, not only from the action of the medicines in general use in these cases, but from the fact that they are relieved by bleeding, since the blood which remains in the vessels surely possesses the same proportion of the poison; and, as for the theory, that the difficulty is due to carbonate of ammonia, I may state that I have injected that salt into a vein without giving rise to any symptoms whatever.

My friend Dr. Duckett, of St. Joseph street, related to me a case where the bromide of potassium appeared to intercept the convulsion. The woman was one of four sisters, all of whom, as well as herself and her mother had convulsions with every child. She was put upon fifteen grain doses of the bromide of potassium, three times a day, and when labor began, as she evinced the symptoms which precede spasms, viz: headache, vertigo, imperfect vision and muscular twitches, he gave her three doses of thirty grs. each at intervals of one hour with complete relief of the symptoms, and she had no convulsion.

The bromide appeared to have no influence upon the labour. In a case of my own where there was a large quantity of albumen in the urine, and considerable œdema of the face and hands, for a month previous to the confinement, I gave ten grains of the bromide with a diuretic, three times a day for a week previous to labour with relief to the headache. No convulsions occurred. It has appeared to me from observations and enquiry that puerperal convulsions in very many instances is due to tight lacing. The mother as well as the daughters, in Dr. Duckett's cases, in whom the disease was considered to be hereditary, were all accustomed to tight lacing. The frequency with which convulsions are observed in primipara, and in unfortunate girls who naturally strive to conceal their condition tends to confirm this observation.

I will close by speaking of a condition which might be interesting to nervous surgeons and public speakers. Unconsciousnesss occurs in two opposite conditions of the vessels of the brain, viz., anæmia and congestion. A nervous person on attempting to act or speak is affected by a violent emotion which produces a spasm of the cerebral vessels, his heart beats violently, his face is pale, the index of the condition of his brain, and the words come forth slowly and with stammering, or he becomes confused and forgets entirely what he intended to say. It is not until symptoms of reaction set in, or as the popular phrase has

it, "until he gets warmed up," that fluency and ease is acquired. I have found a minute dose of morphia or a few whiffs of ether useful in this most embarrassing condition. Let me add the caution that two large a dose produces the opposite condition of the vessels quite as fatal to a successful result.

I dare say alcohol acts similarly on some constitutions.

I feel, in closing, that my limited experience prevents me from doing justice to the subject about which I have chosen to express a few ideas.

511 Wellington street.

TRANSLATIONS.

Asthma Dyspepticum.—(From a paper read before the Berlin Medical Society, Feb. 23, 1876, by PROF. HENOCK).

[The above name has been given to a peculiar form of asthma recently observed by Professor Henock. He relates the histories of several cases and appends such remarks as will, in his estimation, afford some explanation of their leading features.]

Case 1.—Walter M., aged 9 months, recently weaned, has been fed upon cow's milk for the last ten days, has cut five incisor teeth; with the exception of a tendency to costiveness has always been healthy. On the 21st of March, 1875, shortly after drinking some milk mixed with an equal quantity of water, he was attacked with vomiting, which was repeated on the 22nd every time milk was taken. The bowels had not moved since the previous day, the child appeared somewhat emaciated, cried a good deal and was so restless that a careful examination could not be made, the respiration was rather increased in frequency; after a few half grain doses of calomel three green stools were evacuated. On the morning of the 23rd the vomiting had ceased but there was a great change in the child's appearance;

the countenance wore an anxious expression, the respiration was quick and without rythm, the pulse small and difficult to count, the skin pale, the lips cyanotic, and there was complete apathy.

I now saw the child for the first time. Repeated examinations of the thorax did not reveal the slightest sign of disease either of the lungs or heart. Being unable to establish a diagnosis it was agreed to envelope the thorax, and abdomen as far as the umbilicus, in hydropathic packing in order to dilate the cutaneous capillaries, and to sustain the heart's action with Camphor and Benzoin given in doses of ¼ grain each every 2nd hour.

Notwithstanding these measures the symptoms all increased in severity, the collapse and cyanosis became more marked, the respiration was about 60 per miuute and the dyspnœa was attended with characteristic movements of the alæ nasi and the muscles of the neck, the extremities were cold. At midnight the pulse was imperceptible and the breathing began to be irregular ; death seemed imminent and as a last resort ten dry cups were placed upon the thorax, whilst they were being applied the child became quieter, then fell asleep and breathed more regularly ; after the lapse of another half hour irregularity of respiration was again noticed and the cups were reapplied. Hungarian wine and broth were also given in teaspoonful doses and retained,although previously every form of nourishment had invariably been rejected. At 6. a.m., of the 24th the respiration had diminished from 60 to 35, the temperature of the entire body was uniform, but the pulse could not yet be counted. At 10 a.m., we again examined the child in consultation with Prof. Traube, but without arriving at any positive result, though the epigastric region seemed somewhat sensitive to pressure.

No evacuation of the bowels had occured during the last twenty-four hours. After a bath sleep ensued, the skin became moister and the countenance less apathetic.

25th. Temperature somewhat increased, pulse 118,

distinctly perceptible, cyanosis gone. There has been another green stool.

26th.—Pulse 108; respirations 24. Urine abundant. No albumen. Skin moist with perspiration during the night. Face, right hand, and right foot slightly œdematous, (the child lay for the most part upon this side.) A lower incisor tooth has made its appearance.

27th.—Seems quite well.

April 5th.—A similar but slighter attack occurred, which, however, rapidly yielded to a renewed application of four dry cups.

We could not then agree as to the cause of the severe symptoms which the case presented. Notwithstanding the negative result of the examination, I was inclined to believe in the existence of some affection of the circulatory apparatus; but Traube, who indeed saw the child for the first time after it had commenced to recover, attributed all the symptoms to a reflex irritation proceeding from the stomach and based his arguments upon the experiments of S. Meyer and Pribram, reported in the "Juliheft der Wiener. Accadamie der Wissench. 1872."

These experimenters irritated the stomachs of dogs and and cats by means of electricity, heat and chemical irritants, and thus caused diminished frequency of the pulse, and increased arterial tension. They considered these phenomena due to a reflex excitement of the inhibitory fibres of the vagus, and of the voso-motor nerves. Although these reflex symptoms only occurred when both muscular and mucous coats of the stomach were irritated, it is easy to conceive that if, as in the above case, the irritation were intense, similar results might ensue though the mucous coat alone were affected. Traube's explanation of the symptoms was as follows:—Reflex irritation proceeding from the stomach caused contracton of the smaller arteries, hence the coldness of the extremities, imperceptible pulse, excess of blood in the venous system and right heart, accumulation of carbonic acid in the blood, and consequent dyspnœa and cyanosis.

This ingenious theory can only be accepted in explanation of the above case, by regarding the antecedent vomiting as the sole cause of the irritation of the stomach. Nor does the speedy relief afforded by the dry cups harmonize with the same, for they must be admitted to have caused a salutary revulsion of blood from the over-filled lungs. Moreover, the fact that an additional tooth made its appearance immediately after the symtoms had subsided might raise a doubt, in some minds, as to whether teething should not be regarded as the real, or at least, as an exciting cause of the outbreak.

Thus there remained some doubt as to the nature of the phenomena above described, until a few months later, the following case came under my observation, and revealed much more clearly than the preceding, that the irritation of the stomach will account for all the symptoms described.

Case 11.—On May 10th, 1875, a girl æt. 9, was brought to the Charité out-door department, in the following condition ;

The face was pinched and anxious-looking, and together with the mucous membrane of the nose and mouth was slightly cyanosed. There was excessive dyspnœa, but the respiratory movements of the thorax were exceedingly shallow and amounted to 70 per minute, at the same time expiration was attended with a moaning sound ; the pulse was 108, and very small, and the case seemed altogether so serious that we heard with astonishment the child had walked a considerable distance with her mother to the hospital. The spmptoms became more and more urgent, but after several carefully conducted examinations of the thorax we were unable to discover any trace of disease of its contained viscera.

The child complained of shortness of breath, and weakness, headache, and soreness in the epigastric region, which was slightly fuller than normal, tympanitic, and decidedly tender on pressure. From the history of the case we only learned that she had been well until the previous

evening when she began to complain of pain in the stomach. Passed a very restless night, and in the morning the cyanosis and dyspnœa made their appearance. The complete absence of any physical signs pointing to disease of the thoracic viscera was all the more striking from the fact that all the other symptoms seemed to indicate œdema of the lungs, or a large pericardial effusion, which however certainly did not exist. On the other hand, the epigastric fullness and tenderness on pressure pointed the stomach as the seat of the disease. Taking into consideration the apparently grave state of affairs and the absence of any obvious cause, I determined not to take active measures, but order small doses of morphium and await results. The opium, however, was not administered, for the child had scarcely reached home when violent vomiting came on and recurred at intervals till evening. The contents of the stomach, thus evacuated, consisted of the remains of food, including some large pieces of undigested egg. This led to the discovery that on the previous day the child had over-exerted herself in running about the city, and had subsequently bolted a hard boiled egg. A quiet slumber followed the removal of these ingesta and upon awakening the child was well.

This case has for me the significance of a physiological experiment, and is the more valuable from the fact that the subject of it was a human being, and not one of the lower animals. We see here a whole series of phenomena produced by irritation of the stomach, from the presence of undigested food, disappear like magic after removal of the irritating material. Again the dyspnœa, frequent and shallow respiration, small pulse, and cold extremities, led me to infer some grave affection of the heart or lungs, but again a careful examination of these organs failed to reveal any abnormality. Although the headache and epigastric tenderness, should have aroused my suspicion as to the the real seat of the difficulty, both these symptoms were so slight in comparison to the dyspnœa, that I may be excused for having overlooked them. Mechanical compression of the

thoracic viscera was excluded by the undoubtedly normal position of the diaphragm; hence the phenomena mentioned, could only be ascribed to the agency of the nervous system, and the explanation given by Traube, based upon the experiments of Mayer and Pribram, may be accepted for this case. In support of this view may be adduced the liability of dyspeptic children to convulsions, in consequence of indigestion, which are obviously the effect of anæmia of the brain from reflex spasm of the cerebral arteries resulting from the gastric irritation. I have also seen syncope, coldness of the extremities, collapsus faciei &c., caused by the presence of a tapeworm in the intestines of a child, and explicable on the same hypothesis.

The question now arises whether in addition to the results obtained by experiment there may not be other causes capable of inducing gastric irritation on the one hand and disturbance in the function of respiration on the other. Without entering upon any discussion concerning the "Tussis Stomachica" of the older authors I may mention the case of a boy already reported in my "essays on diseases of children," in the year 1868 (Neue Folge. Pag. 314.) This case was one of fermentative dyspepsia, cured by the use of kreasote, and in which dyspnœa accelerated respiratory movements, and panting expiration were the chief features without, however, any signs indicating spasm of the blood vessels. To be borne in mind also, are those by no means rare cases of dyspepsia attended with a peculiar feeling of oppression and an irresistable desire to take a deep inspiration which, nevertheless fails to afford relief for a time, though the attack usually ends with such an inspiration or with repeated yawning. Possibly we may have here to do with a reflex action implicating the vagus, for under similar circumstances there is often intermittent action of the heart.

But to return from this digression to the subject of our remarks. I am inclined to think cases similar to those I have related are by no means rare although the current literature of "hepatico-gastric affections" does not mention

them. In addition to the cases already described I have had the opportunity of observing two others.

Case 3. Marie L. æt. 3 months was brought to the hospital, Feb. 3, 1875, that is, before the one first described. On looking over my case book I was struck by its resemblance to the latter, although the symptoms were less characteristic. The child was being brought up by hand and had always been healthy, but for the last three days the bowels had not moved. During the last night breathing became embarrassed and towards morning convulsions occurred. I found cyanosis, shallow respiration (50–60 per minute) a small rapid pulse, cold hands and feet and a moderately distended abdomen. Examination of the thorax revealed no abnormality and there was no cough, but the appetite had failed entirely since the previous day. I ordered a teaspoonful of Syrup. Spin. Cervin. (Buckthorn) to be taken every two hours which caused a free action of the bowels, and on the following day the child was well.

Case 4. On the 9th of January a boy 9 years old was brought to the hospital by his mother who said he had been treated at another hospital for "disease of the heart" two years previously. For six days he had been suffering from pain in the epigastric region which was somewhat prominent and sensitive to pressure; but the most striking symptoms were, the quick and shallow respiration (over 50 per minute) the slightly cyanotic tinge of the face and lips, and the small and frequent pulse (120 or more to the minute); coldness of the extremities was of doubtful import, because the boy had just come in from the cold air. The physical signs showed the lungs to be healthy but the apex beat of heart was found to alternate between the fourth and fifth intercostal spaces and at the same time the first tone was accompanied by a slight blowing murmur whilst the second pulmonic sound appeared to be abnormally distinct. The præcordial dullness extended beyond the right sternal margin. In addition to these signs of mitral insufficiency and enlargement of the right ventricle, the tongue was

thickly coated and the breath fœtid. An emetic was administered and on the following day all signs of disease had disappeared with the exception of those connected with the mitral insufficiency.

I venture to think the records of these cases suffice to show a direct dependence of the phenomena which they presented upon an irritated condition of the stomach, and therefore hold that the term "Asthma dyspepticum" is a suitable designation for them. An attentive observation will doubtless increase the list of such cases and they will probably be found to occur most frequently in city practice.

F. B.

Dr. Ortille.—Treatment of Convulsions in children by Anæsthetics.—(Bull. de Thérap. quoted in Schmidt's Jahrbucher No .1. 1876.

Half of the cases of convulsions during childhood run a favourable course, rarely does an attack lead to death. As a rule they depend upon dentition, and are accompanied by constipation, In other cases transitory affections of the digestive tract, indigestion, or the presence of worms, are the cause. These last, however, do not always end favourably, but death results from the intensity of the attack, from asphyxia, or from congestion of the nerve centres, which the author regards as primary not secondary. A cerebro-spinal irritation is always the predisposing factor ; it leads to hyperæmia, turgesence, and swelling, causing considerable tension of the congested parts, and finally to a greater or less degree of compression of the brain substance, with elevation of the temperature.

As a reaction to this compression a convulsive attack follows, whose determining cause is also the congestion.

The author compares these processes with those in partial or general hypertrophy of the brain, and dropsy of the ventricles, which also, by compression of the brain substance, lead to convulsions. On this account he regards those remedies as most effective which in any way produce

anæmia of the brain—energetic derivatives, cold, anæsthetics. The last named remedies weaken the activity of the ganglion cells, lessen the determination of blood, and produce a reduction of the congestion by causing contraction of the blood vessels, and in consequence anæmia of the brain, and sleep. As authorities the author quotes Durham, Bertui, Donders Claude Bernard and Hammond.

In this employment copious, almost critical, perspirations supervene, which decide upon the course. Anæsthetics are recommended particularly in the severe cases in which a fatal ending is feared; in such the physician must do everything to produce anæmia of the brain, and should not fear to change quickly the remedies in order to relieve the congestion.

The principal remedies which the author employs instead of derivatives, purgatives, and cold are, (1) the compression of the carotids, and (1) chloral hydrate and chloroform. A report of 6 cases follows, in the first of which compression of the carotids, in a girl 6 years of age relieved within 2–4 a convulsive attack of over two hours' duration. He uses the caution to continue the compression for a short time after the cessation of the attack. Six months later the same child was again attacked and compression of the carotids did not succeed, the child had become so fat; 3ss of chloral hydrate was given, but the attacks increased; finally with chloroform they were controlled within 5 minutes. In other cases the author speaks favourably of chloral in 15 gr doses. In the same connection he speaks of the convulsions occurring in the course of organic kidney disease, and as a consequence of the congestion induced by pregnancy. The predisposing cause of the convulsions is here also cerebral irritation, caused by the altered condition of the blood: the determining cause however, is always the compression of the nerve centres, by the congestion, in an unyielding cavity, which leads to dropsy of the ventricles, or œdema of the brain or its membranes. In such cases the compression (of the carotids) must be continued for a much longer period as the cause disappears slowly. W. O.

Oxygen as an Antidote to Poisoning by Phosphorus.

Köhler and other Germans have pointed out the fact that fresh rectified oil of turpentine does not act so efficiently as an antidote to phosphorus as the ordinary article which

has been kept for a length of time, this difference being due to a larger amount of oxygen contained in the latter. In consequence of this observation, Thiernesse and Casse were led to make experiments for the purpose of ascertaining whether oxygen alone would not act as an antidote. They gave phosphorus to a considerable number of dogs, in sufficiently large doses to produce its fatal effects, and when the symptoms of poisoning became pronounced, injected oxygen gas into the saphena vein in large quantities—up to 800 c.m. Of twenty-two experiments the results in nineteen were favourable; the animals did not die from the poison. These experimenters are therefore of opinion that oxygen gas introduced into the veins in large quantities counteracts poisoning by phosphorus, and that the antidotal effects of oil of turpentine can only be ascribed to the oxgyen it contains.

Oxygen gas like common air may be freely injected into the veins, without danger, *provided it be done slowly.*

The Ætiology of Angina Pectoris.

According to G. See, (France Med., No. 26, et Seq. 1876.) Angina Pectoris is never a simple neurosis but always depends upon ischæmia of the heart. As causes of this condition are to be reckoned; 1st. mechanical alterations of the coronary arteries, degeneration of the muscular tissue of the heart and dilatation of its cavities, in consequence of which the coronary arteries are unable to carry a sufficient supply of blood to the heart.

2nd. A condition more rarely met with, in which the affections of the coronary arteries is purely functional, and and may be caused by smoking, hysteria, &c. In the great majority of instances an actual organic lesion exists. See thinks all the symptoms of an attack of angina can be explained by this ischæmia, which is also in his opinion, the cause of death.

Deficient supply of blood to the myocardium, and the terminal filaments of the vagus contained therein gives rise both to the pain and to the feeling of suffocation. This irritation of the sensory nerves induces a reflex excitement of the inhibitory motor fibres of the vagus thus causing the pulse to become slower, and giving rise to interruption of the heart's action towards the end of the attack; lastly the vagus becomes exhausted and the heart again contracts rapidly.

The radiation of pain towards the shoulders, arms, and

other parts of the body is due to transference of painful impressions from the sensory filaments of the pneumogastrics to those of other nerves.

The palliative measures to be employed are during the the attack, hypodermic injections of morphia, or enemata, containing 30–45 grains of chloral hydrate. Some cases have been relieved by spiritus mindereri, in doses of ℥ii to ℥iii, with an equal quantity of water.

Sée has had no experience of Amyl Nitrite in these cases.

During the intervals he recommends bromide of potassium, alternated with digitalis. The patient should live quietly and temperately, avoiding tobacco, tea, and coffee entirely but a small quantity of alcoholic liquors may be allowed.

F. B.

Hospital Reports.

MEDICAL AND SURGICAL CASES OCCURRING IN THE PRACTICE OF THE MONTREAL GENERAL HOSPITAL.

Excavation of the whole of one Lung in a case of Phthisis.

Under the care of Dr. REDDY. Reported by J. D. CLINE, B.A., M.D.

William Skinner, æt. 41, was admitted into the General Hospital in March 1876. He had been a patient in the hospital several times in the last three or four years. On admission the disease was evidently in a very advanced stage. His voice was very husky, and scarcely louder than a whisper. He suffered great pain in swallowing, so much so that he could not take anything solid. The expectoration was purulent and very profuse, and brought up with great difficulty, and exhaustion. In the right lung there was blowing, breathing, and gurgling in all the regions. In the left the breathing was amphoric, most distinctly so in the infra-clavicular region in front, and at the root of the lung behind. The percussion note over this lung was not amphoric ; not the note which resembles that of pneumothorax,

though very hollow. The patient died about the 10th of April.

Autopsy 36 *hours after death.*—The body was extremely emaciated. The right lung was filled with cavities of all sizes up to one in the apex nearly as large as the fist. There were no pleuritic adhesions on this side, except at the extreme apex. Some of the cavities were quite superficial, the outer wall being formed by the pleura only, the yellow purulent matter showing through it. On the left side there was no lung tissue, except a small piece at the base in front, about two inches long by an inch and a half thick, which crepitated slightly. The rest was one immense cavity. The pleura was firmly adherent all around, and as it was detached carefully it collapsed like the flaccid walls of a large bladder. The capacity of this cavity was 42 ounces. The walls were thin, consisting of the pleura only, except in the situation above mentioned. The inside was almost dry, and traversed by numerous trabeculæ, which represented the thickened vessels, and some bronchi. The large bronchi were ulcerated to a level with the walls.

The larynx was extensively ulcerated. The epiglottis was thickened and rough on its outer surface, margin and base of inner surface. The vocal chords were much thickened. The whole of the arytenoid cartilages except their bases, were exposed and rough, being in a small cavity which had ulcerated around them ; and the true vocal chord on the the right side was separated from its attachment to the arytenoid cartilage by a deep notch of ulceration. The kidneys and liver were slightly amyloid, the latter appearing to be fatty also. The spleen was very large and amyloid. The amyloid disease was very prettily shown in the intestines, by the characteristic dark brown color produced by iodine, tracing out the course of the small vessels.

I have never seen recorded a specimen of such extensive excavation. The length of time that this man lived with the small amount of respiratory surface which was found in these lungs, is also interesting and marvellous.

Reviews and Notices of Books.

A Treatise on Surgery, its Principles and Practice.—By T. Holmes, M.A., Cantab: Surgeon to St. George's Hospital, &c.; with four hundred and eleven illustrations, chiefly by Mr. Westmacott. 8 vo., pp. 960. Philadelphia: Henry C. Lea, 1876.

The author of this treatise is well known as the editor of the large work in five volumes entitled "A System of Surgery by various authors." He has also given us a very excellent treatise on the surgical diseases of children, which is notable for the clearness, accuracy and elegance of its composition. When it was announced that Mr. Holmes was preparing for the press a treatise on surgery, we looked forward to its publication with great interest as we felt certain that it would be a fair exponent of British surgery given in that pleasing style which characterised his former productions, nor were we disappointed when we received a copy of the English edition. The copy before us is a reprint from the publishing house of Henry C. Lea of Philadelphia. The author in his preface states that he intended "this book to be to some extent an introduction to the more elaborate system of surgery of which I am the editor," and it may be observed that the author quotes from that treatise to some extent, at the same time it will be seen that there is throughout the work evidence of personal observation and experience so that the writing is no servile copy either in text or teaching of the former treatise. The author has certainly succeeded in giving a highly practical account of surgical injuries, and diseases.

The work is divided into forty-four chapters. In the first five we have considered the subject of inflammation, the process of union of wounds, complications of wounds and injuries, poison wounds, hemorrhage and collapse, burns and scalds. In the section on the mode of dressing wounds the author gives a description of the antiseptic method and he states his strong conviction of the beneficial results of that method

of treating wounds, in saying this he does not declare his adhesion to the "germ theory of disease" but remarks that by adopting the method advocated by Mr. Lister greater care in the dressing of wounds is adopted either by the surgeon himself or his assistant. This may be considered the great secret of the success of the antiseptic method of dressing wounds. In the chapter on hemorrhage the author gives a very clear description of the various means employed by the surgeon to restrain the bleeding in wounded vessels. The use of the carbolic catgut ligature is discussed and he proves by one case at least that the employment of this means is capable of obstructing the vessel without actual division of its coats, he fully recognises however that this is not attainable in every case and remarks that if it were so secondary hemorrhage would be unknown. In giving his own experience of the use of the carbolised catgut ligature he states that the "constant use of this form of ligature in operations of all kinds for several years has convinced me that secondary hemorrhage is far rarer than with the silk ligature, even in wounds which suppurate freely," and furthermore that the presence of the ligature itself does not interfere with the process of primary union, nor does it act as a foreign body. This is certainly very convincing evidence and one which we can fully endorse so far as our limited experience goes for although we have not, so far, ligated large vessels with the carbolised gut, we have on numerous occasions resorted to its employment and always with perfect results.

In this chapter the author gives a full description, after Pirrie, of acupressure and compares that method with an older method, or torsion. In expressing an opinion on both the relative value of these methods he remarks that acupressure and torsion are perfectly reliable methods of arresting hemorrhage but as a matter of private opinion he states that neither of them appear to be so convenient, so safe or so likely to promote the rapid union of a wound as the carbolised ligature. The chapter on burns and scalds

is short but sufficiently full for a work of this character, the author adopts the classification of Dupuytren ; to this chapter is appended a short description of lightning stroke, which according to our author occasions "injuries which are the combined effect of electric shock, mechanical concussion and burn."

In chapter six we have considered the general pathology of fractures and dislocations, and also the process of union in the hard parts, after which the author passes on to individual injuries, commencing with those of the head and spine, and face, injuries of the neck, of the chest, abdomen and pelvis, of the upper and lower extremities. These latter are particularly full, and are amply illustrated, especially fractures of the cervix femoris, there are also given some illustrations after Biglow, of dislocations of the hip joint.

The chapter on gun shot wounds includes injuries of the head, chest, abdomen and extremities. In this chapter the comparative results of excisions, of the knee and hip, and shoulder and elbow joints are referred to, and he remarks that the two latter operations were brought into general acceptance in this form of injury, mainly in consequence of their success, in warfare, while excisions of the knee and hip, although they have sometimes succeeded in war, can count very few successes. This well-known fact leads to a marked distinction in the surgery of gun shot wounds of the upper and lower extremities.

The subject of Tumours the author divides into two well marked classes, firstly, what are termed *homologous*, in which the growth resembles, in exactness, anatomically, some tissue of the body. These increase in size, displace structures but do not invade them ; clinically they are otherwise called benign or innocent. Secondly those which do not present any resemblance to the normal tissue in which they are situated, and hence are called *heterologous*. Clinically, this class show a tendency to ulcerate, invade all structures and influence the general health. Tumours of this kind are

malignant. But besides these two classes which, in well marked examples are easily recognized, a third class is constantly seen, which clinically and anatomically belongs to neither division, to these the author has allotted the term *sarcoma*, a term revived by the modern German school, and which is used to designate a growth or tumour whose structures present some resemblance to the rudimentary forms of some natural tissue of the body. The illustrations in this chapter are very clear and good. Scrofula receives separate consideration, in this the author describes the subject of tubercle, its kinds, manner of formation, and connection between it and ordinary inflammation.

Hysteria is the next on the role, at first sight a novel subject to be found discussed in a surgical treatise, but here our author goes into the question of nervous mimicry and nervous affections generally, which may to a considerable extent bother the surgeon. Space will not permit our discussing each chapter as it comes before us. Those on diseases of the bones, joints, and diseases of the arteries, are very clear, and contain a vast amount of accurate and reliable information. The illustrations are particularly good, nearly all of them being from preparations in St. George's Hospital Museum. Amongst the illustrations we observe several thermographs, one of traumatic fever, one of pyæmia, one of hectic fever, of erysipelas, and one of tetanus. There is a table of contents and list of illustrations, but we regret to notice that in the American edition the publisher has omitted marginal notes which form a distinguishing feature of the orignal work. We with confidence recommend this work to the professsion as being one of the best text books that has issued from the press.

A manual of minor Surgery and Bandaging. By CHRISTOPHER HEATH, F.R.C.S. Surgeon to University College Hospital, and Holme Professor of Clinical Surgery to University College, London, &c. Fifth edition, 8vo: pp. 308. Philadelphia; Lindsay & Blakiston, 1875.

This little work may be regarded as an indispensable adjunct to the library of all young surgeons, and even those of more advanced years may benefit by its practical teaching, more especially when from circumstances they have

lacked the opportunities enjoyed by the fortunate few who have held the responsible though valuable post of resident surgeon to an hospital.

In the introduction the author makes some admirable remarks on the relations between the house surgeon of an hospital and the other officials, and also on his duties to the patients under his charge, and to the public. Having himself been House Surgeon at Kings College Hospital, Mr. Heath speaks with authority, pointing out the various difficulties of the position, which however can be readily overcome, by care and attention, and a proper appreciation of what is due to himself and others.

The work consists of thirteen chapters, and in all of them will be found practical directions for the treatment of surgical diseases and injuries. In chapter 1st. is discussed the subject of hæmorrhage, in which will be found many practical suggestions, not to be met with in the larger works on Surgery. There are in this chapter specific directions, short, concise, and to the point, how to treat scalp wounds, wounds of the face, bleeding from the nose, cut throat, ruptured frænum, bitten tongue, stabs, cuts, wounds of the palmar arch, wounds of veins, etc., and towards the close of this chapter the various methods employed for the arrest of hæmorrhage, as pressure, the tourniquet, forceps, ligatures, etc., and also the methods of tying, acupressure and torsion.

There is a good chapter on various surgical operations, such as the house surgeon of an hospital is sometimes called upon to perform, but the author points out the necessity for weighing well the question of urgency of the case, lest the house surgeon should come in collision with the attending surgeon. As the author very correctly remarks, "Some visiting surgeons wish to do everything themselves, and are very wroth if a house surgeon has opened an abscess or tightened a bandage." To this we may observe that a certain degree of latitude should be accorded to the house surgeon of a hospital; and, further-

more, the attending surgeon should bear in mind that his subordinate officer is there to use his own judgment, and if he does things well, deserves credit rather than censure.

There is a good chapter on bandaging, and throughout will be found specific directions, with good illustrations of the method of applying surgical apparatus. The work is illustrated with eighty-six wood cuts. There is a chapter on case-taking; also one on post mortem examinations, at the close of which is a table of the average weights of the various organs of the body. The work is addressed throughout to house surgeons of hospitals, but although it affords to gentlemen occupying those responsible posts most important and valuable information, its teaching will be found of use to all.

Periscopic Department.

MEDICINE.

Some Remarks on Whooping-Cough and its Treatment by Carbolic Acid Inhalations.—By SAMUEL LEE, M.R.C.S.

Before alluding to the treatment of whooping-cough by inhalation, we may with advantage consider what means we have at our disposal in retarding the spread of the malady. It is apparent that, in a considerable majority of cases, no precautions likely to lead to the desired result are adopted; and at first sight it appears somewhat surprising that isolation of patients suffering from scarlet-fever, small-pox, and enteric fever, should be strongly advocated, and in many instances enforced, when the victims of pertussis, which may be looked upon as one of the most fatal diseases to which children are liable, are submitted, as a rule, to no such restraint. There is reason to believe that the isolation of patients in a special ward in some of our hospitals,

both in London and the provinces, would be beneficial. In a former number of the *British Medical Journal*, we were favoured with an interesting communication from Mr. Richard Harrison, of H.M. Convict Prison, Dartmoor, on the treatment by carbolic acid inhalations; and the general conclusion arrived at was that, in the majority of cases so treated, considerable relief to the more urgent symptoms was the result. The inhalation of the acid may be conducted in two ways, either by long-continued inhalations of a weak solution, or by strong inhalations three or four times a day. For this purpose, I have used the steam-draught inhaler, by means of which, owing to the free admixture of fresh air with the vapour to be respired, the inhalations can be prolonged for several hours; and, there being no effort of inspiration, one of the main difficulties in obtaining the desired result in young children is overcome. In cases complicated with obstruction of the bronchial tubes with mucus secretion, a stimulating inhalation will sometimes excite spasmodic contraction and expulsion of the offending material. I have used the carbolic acid inhalations in the mild and severe forms of the disease, and in both with considerable relief. In three cases that have come under my notice in adults, in one of which the malady had continued in spite of all treatment for eight months, attended with hæmoptysis and severe and frequent attacks of coughing, the relief obtained by inhalation of the acid was very marked. I hope on a future occasion to be able to communicate to the *Journal* a report of cases treated by the above method.—*British Medical Journal.*

On treatment of Convulsions in Infants.

Mons. Blanchez, in a lecture on diseases of children, in the *Medical Times and Gazette*, lays down the following rule for the treatment of convulsions. If it be a single attack, and gives no signs of a tendency to recur, it is best to confine ourselves to some hygienic precausions, such as secur-

ing efficient ventilation, etc. If the attacks run into each other, or recur at short intervals, revulsives should be applied to the lower extremities, compresses of cold water, or of water with ether, being also laid on the temples. Compression may at the same time be made on the carotid arteries, as recommended by Trousseau. The pulsation of these vessels must be sought for at the lateral part of the neck, and then they must be gradually compressed backward toward the spinal column. The amelioration should be rapid; and if after two or three minutes it has not manifested itself in an evident manner, the compression should not be longer continued. Inhalations of chloroform may then be resorted to, administering them in a very gentle and gradual manner. In order to avoid all danger, slight as this is, it is necessary that a certain quantity of air should be always mixed with the chloroform vapours. In some cases special indications present themselves, as for the employment of an emetic when it is well made out that the convulsions are due to indigestion. When the attack has been overcome, we must try to modify the the general eclampsic condition by having recourse to anti-spasmodic treatment; but the management of agents of this description requires great prudence, several of them being of a dangerous character. Their dose is of great importance. For an infant, from eight to fifteen months old, we should never exceed the dose of thirty centigrammes, after having commenced with five centigrammes. The maximum dose of belladonna powder is ten centigrammes, after commencing with one, increasing it very gradually, and carefully watching the throat and pupils of the child. We may proceed more boldly with oxide of zinc or James's powder (which M. Blanchez has not found of any special utility), of which ten centigrammes may be given every two hours; but bromide of potassium and chloral are to be preferred to any of these remedies. Of the bromide from ten to twenty centigrammes may be given every two hours, until fifty or sixty centigrammes are reached in an infant, and from two

to three grammes in a child of seven. The effect should be manifest at the end of twenty-four hours, or the dose should be increased. A mixed treatment of the bromide and chloral gives little better results, the bromide being given during the day and the chloral at night. The maximum dose of the latter agent is twenty-five centigrammes for an infant, and fifty for older children.—*Med. and Surg. Reporter.*

The Eucalyptus Globulus as a Cancer remedy.

The profession may well look with distrust on alleged "cancer cures," but the journalist must not omit to mention them. The latest is the famous *eucalyptus globulus*. The *Doctor* quotes six cases reported by Prof. Luton, of Reims, in the *Progres Medical*, all successful; and as Prof. Luton is a respectable practitioner, and the subject most interesting, we give them :—

The first case was that of a woman, 78 years of age, suffering from an encephaloid tumour of the breast, in whom the administration of the tincture of eucalyptus was followed by phlegmonous swelling of the tumour, erysipelatous redness of the surrounding skin, mortification of the tumour, and rapid falling off of the eschars, accompanied with fever, lassitude, anorexia, furred tongue, headache, and delirium. The cicatricial remains of the tumour had a keloid appearance, and represented the stroma of the original disease. In spite, however, of the continued use of the tincture, this mass subsequently increased in size, and began to assume some doubtful signs of malignancy, when Prof. Luton substituted the powdered leaves of the eucalyptus, one gramme daily, for the tincture, and after three or four days the same phenomena of death of the tumour occurred as on the first occasion. The patient is still under observation, and hopes are entertained by the Professor that the case will terminate in complete cure.

The second case was that of a woman, sixty-eight years of age. suffering from symptoms of cancer in the stomach for nine months, and a tumour in the abdomen as large as a turkey's egg, to the left of the epigastrium, and apparently attached to the surrounding parts. She was ordered ten grammes of the tincture of eucalyptus daily, with divers interuptions, during five months, and at the end of that time the tumour had become much smaller, isolated and more movable, less firm in consistence, and more sensible to pressure ; and at the same time the patient had lost the cachectic appearance, and appeared in better health. During the interruption in the administration of the medicine, the patient's sufferings were increased, and a return to it produced a marked amelioriation. She is still under observation.

The third case was that of a man, fifty-three years of age, suffering from a tumour in the right hypochondriac and epigastric regions, and presenting many of the subjective symptoms of cancer in the stomach. After three months treatment by the tincture of eucalyptus, ten grammes daily, the patient was much better, and the tumor had diminished in size and consistence. He is still under treatment.

The fourth case was that of a man, 52 years of age, suffering from cancer of the stomach for ten and a half months, and in a much worse condition than the two preceding. In fact, he was reduced to an incredible state of ematiation by the incessant black vomiting, and was almost moribund. Ten-gramme doses of the tincture of eucalyptus were administered, with great relief to the symptoms for a short time, but the vomitng soon returned, and could only be controlled by subcutaneous injections of sulphate of soda. The patient is still under observation, and Professor Luton considers that his life has been considerably prolonged by the treatment.

The fifth case was that of a woman, 45 years of age, suffering from excessive metrorrhagia, uncontrollable by the usual hæmostatics, with symptoms of cancer uteri in its

early stage. The hemmorhage was completely controlled in less than eight days by ten grammes of the tincture of eucalyptus daily. After the relief of the metrorrhagia, the woman would not submit to an examination, so that there is some doubt about this case.

The sixth case was that of an old gentleman, nearly 80 years of age, who had had an epithelial cancer removed, by the knife, from the root of the nose; but the disease subsequently returned, and attacked the nose and angle of the right eye, producing a large ulcerating tumor, which bled excessively. The first dose of the tincture of eucalyptus produced a sensible effect, and after a very few more the tumor perished and was thrown off, leaving a large excavation with healthy granulations. The process of reparation proceeded most favorably, and was almost completed at the time of publishing the case.—*Med. and Surg. Reporter.*

Treatment of Varicose Ulcers by the Tartrate of Iron and Potass.

Dr. Bourguignon having derived so much advantage from this substance in the treatment of phagedenic chancre, as recommended by Ricord, was induced to extend its application to chronic wounds in general, and especially to varicose ulcers of the leg with hard, well-defined edges and unhealthy surfaces. For the last ten years he has found these obstinate cases readily yield to this treatment, so as to become cured in two or three months. A solution of from two to six parts of the tartrate (according to the sensibility of the ulcer) is to be made in 100 of pure distilled water, a few drops of ammonia being added to prevent any precipitation. Pledgets of very fine charpie are to be soaked in it, and applied to the ulcer night and morning, and covered over with a thick layer of cerate, which must be so removed, with the aid of tepid water, as to leave none of the charpie sticking in the ulcer. After cicatrisation has commenced, the lotion may be applied only in the

evening, simple cerate being substituted in the morning. If the application is painful at first, opiate cerate may for a while be employed alternately. The tartrate is also a valuable remedy given internally, a mixture of four grammes in 150 of distilled water forming a valuable analeptic in chlorosis, chloro-anæmia complicated with gastralgia, and in dyspepsia, when solid preparations of iron, are not borne by the stomach. Given in doses of a tablespoonful before each meal, it much facilitates digestion. After a few weeks, more energetic ferruginous and stomachic preparations may be substituted.—*Union Méd.*, March 30.

Chloral Enemata in Infantile Convulsions.—M. Polaillon stated at the Paris Medical Society that encouraged by the benefit he had derived from chloral in puerperal convulsions, he had in two cases administered it with success to children as an enema (three grains in five drachms of water.) Calm sleep and a cessation of the convulsions followed, and a similar enema given 24 hours later completed the cure. M. de St. Germain believed chloral an eminently useful remedy in convulsive diseases, and related a case in which he had given it by the mouth to a child fourteen years old, the subject of tetanus, in doses increasing from three to twelve grammes per diem, the patient recovering on the seventeenth day. M. Blondeau had, with Trousseau, kept a child ten years of age under the influence of chloroform for twelve hours with success. M. Lolliot also prefers chloroform, and had kept a child three months of age under its influence during twenty-four hours. M. Lunier, in a case in which bromide of potassium had been used without effect, found that chloral arrested both the convulsions and the accompanying fever. He thinks that, carefully employed, it is preferable to chloroform, but that we must be cautious in giving large doses —*Union Méd.*, March 23.

SURGERY.

Note on the treatment of Tetanus by Nerve-stretching. By GEORGE W. CALLENDER, F.R.S., Surgeon to St. Bartholomew's Hospital.

In a paper read before the Abernethian Society*, Mr Milner has advocated the treatment of tetanus by nerve-stretching, and in some observations on this operation upon nerve-trunks† I have expressed my regret, in narrating a case of tetanus, that the peroneal nerve was not exposed and stretched. Since this was written no case of traumatic tetanus has come under my care, but had the opportunity been given me I should certainly have planned an operation such as I have indicated, supposing, of course, that the nature of the case permitted me to stretch a nerve-trunk between the site of injury and the nerve-centres. I am glad to hear that quite recently M. Verneuil has had under his care in La Pitiè a case which he will, I hope, shortly publish. A man had suffered from a severe crush of the hand, and, following this, showed the symptoms of tetanus. M. Verneuil exposed the median nerve at the elbow, and the ulnar at the wrist, and proceeded to exercise traction on them. The patient recovered completely.

I hope that this note may lead to a further trial of this method of treatment. The operation is not a severe one. The nerve is exposed and is stretched, when freed from its surroundings, by traction with an ordinary vulsellum, from its central connexions. No harm is likely to be sustained as a consequence. There is now abundant evidence, in the cases reported by Billroth, Nussbaum, and myself, of the tolerance with which nerves submit to forcible stretching, so far as the after performance of their functions is concerned. In view of the unsatisfactory results of the treatment of traumatic tetanus as at present conducted, there is full justification for the performance of the operation as, at least. a last rescource, although I should myself advocate its trial, as in the case under the care of M. Verneuil, as soon as the signs of the disease are destinctly recognized.

The Lancet

*St. Bartholomew's Hospital Reports, vol. xi., 1875, p. 287.
† THE LANCET, June 26th, 1875; Clin. Soc. Trans., vol. vii., 1874 p. 100.

CANADA

Medical and Surgical Journal.

MONTREAL, JUNE, 1876.

COLLEGE OF PHYSICIANS & SURGEONS, L. C.

The semi-annual meeting of the Board of Governors of the College of Physicians and Surgeons of Lower Canada, was held in this city on Wednesday the 10th May ultimo, when some very important business was transacted.

In our last we published a series of amendments which it is proposed to make to our present act of incorporation. These were fully discussed at the meeting, and their general tenor accepted. A committee was named for the purpose of drafting a bill of amendments to the present act, which will be again brought up for discussion before the College at its next meeting in September; after which it will be submitted to the Quebec Legislature, and we should suppose, that coming as it will, from a recognized body, who hold status as the representatives of the Profession in this Province it will becomc law. It is greatly to be desired that the profession more generally should assist in building up an institution which has, during the past few years been allowed to languish, we might almost say die of innanition. We have heard some strictures concerning the usefulness of the College and the desirableness of prolonging its existence. We are inclined to the belief that it would be far better for the malcontents to comply with the regulations of the College and become members, in due course of time, take some interest in the proceedings of the College, and if the old fogies in whose hands the affairs of the College are at the present, time are too slow

for our young progressive fellow-countrymen, simply assist in putting in better men.

A very pertinent question is asked by the young gentleman who edits the "L'Union Médicale du Canada." He is desirous of knowing what good the Medical profession has derived from the establishment of the College of of Physicians and Surgeons of Lower Canada. To this we can simply reply that no person can legally practice his profession in this Province without holding the license of the College. Before the establishment of the College,the Profession in Lower Canada was governed by an act or ordinance passed in the reign of King George the third. Similar acts existed in all the colonies under the British Crown—many are in force to this day. By the terms of that act the members of the Board were appointed by the Crown, under the present system the members of the Board are elected by the profession. This may not be considered by our contemporary a gain in the right direction. The article alluded to appears to us to be terribly revolutionary, with very little knowledge of facts appertaining to the question at issue. But again, the status of Medical education has been raised since the passing of the act of 1874, before the passing of that act, any person could demand an examination from the Board without any evidence of having attended a curriculum of study, under the act a curriculum is demanded, and before commencing to study medicine the candidate must pass an examination in the preliminary branches of general education. These are surely gains in the right direction.

We are not anxious to excite the terrible ire of our contemporary, as we fear he would slay us without mercy, but simply beg of him to become a member of that do nothing College, and if no better thing can come of it, he will, at least, have the satisfaction of sharing in the "Homeric supper" which he suggests, or of being able to write his own epitaph on the monument which will have to be raised to the memory of the late College of Physicians and Surgeons of Lower Canada, after its effulgence has been for ever extinguished by "L'Union Médical du Canada."

THE CANADA MEDICAL AND SURGICAL JOURNAL

With this number we close the fourth volume of the new series of this periodical, and we desire to return thanks to our contributors who have aided the publication by preparing for its pages many important original papers. In commencing the new volume in July next, we have to announce to our subscribers that a new feature will be introduced which will greatly add to the interest and usefulness of our journal.

Our efforts have been seconded by a number of gentlemen who have assumed the task of giving us for publication translations from many foreign Journals, so that we will endeavour to keep before our readers a synopsis from foreign sources of all important articles. This will come under the heading of Translations. A reading club in connection with this work been established, and we have at command the following foreign Journals:

Archiv. für Path. Anatomie and für Klinische Medicin, (Virchow).
Archiv für Klin. Chirurgie, (Langenbeck).
Archiv (Deutsches) für Klinische Medicin.
Archiv der Heilkunde.
Archiv für Gynæcologie.
Archiv für Kinderheilkunde.
Archiv für Ophthalmologie.
Archiv für Mikroskopische Anatomie.
Centralblatt für die medicinischen Wissenschaften
Wiener Medicinische Presse.
Berliner Klinische Wochenschrift.
Revue des Sciences Medicales.
Archiv. Generales de Medicin.
Bulletin General de Therapeutique.
Gazette Hebdomadaire.
Bordeaux Médical.
L'Année Médicale Journal de la Société de Médicine de Caen et du Calvados.

Selections from these journals of scientific interest, and whatever is of practical value will be translated and given to us for publication. This will, we trust, increase the usefulness and give additional interest to our pages.

We have been requested by Dr. Pepper to give insertion to the folllowing circular, and as it contains matter of general interest to our readers we cheerfully comply.

UNITED STATES CENTENNIAL COMMISSION.

INTERNATIONAL EXHIBITION, 1876,—PHILADELPHIA

BUREAU OF MEDICAL SERVICE.

Owing to the very large number of persons who contemplate a visit to Philadelphia during the coming summer, it seems important that the utmost publicity should be given to all facts bearing on the sanitary condition of the city.

The fcllowing statistics, which have been obtained from the most authentic sources accessible, represent the mortality in some of the cheif cities of the world during the past four or five years :—

	Number of years.	Average population	Average total mortality	Average death rate per thousand.
VIENNA, . . .	5	648,560	20,424	31·42
NEW YORK . .	5	994,458	29,601	29.93
BERLIN, . . .	4	950,000	28,420	29.91
LONDON . . .	5	3,284,488	76,741	23.33
PARIS	4	1,851,792	42,724	23.06
PHILADELPHIA .	5	744,831	16,573	22.27

While thus showing an average rate of mortality more favorable than that found in any other city containing over 500,000 inhabitants, Philadelphia has recently (1874) attained a degree of healthfulness almost unparalled viz : with a population at the time of 775,000, the number of deaths was but 14,966, giving a death rate of only 19.3 per thousand. These very favourable results are largely due to the abundant and cheap water-supply, and to the opportunities given, even to the poorest citizens, for the enjoyment of pure country air in the great Fairmount park, which contains 2991 acres. The extent to which this is valued by the citizens may be inferred from the fact that during the year 1875, the Park was visited by over eleven million persons.

The most powerful influence of all, however, is the absence of that overcrowding of the population, which is the most fruitful source of sickness and death in many quarters of nearly all other large cities. This will be more clearly comprehended when it is remembered that the 817,488 inhabitants of Philadelphia are spread over an area of 1298 square miles, which are traversed by more than one thousand miles of streets and roads ; and that the city contains, in addition to other kinds of buildings, 143,000 dwelling-housee occupied by families,—a number exceeding by over 40.000 that of any other city in America.

The climate of Philadelphia is also, on the whole, a favorable one, although presenting many of the peculiarities common to inland localities. The mean annual temperature of the last ten years is 53.73° Fahrenheit; the average annual rain-fall is about forty-five inches.

The following table exhibits the mean temperature of each month for the last ten years, showing that the range is far less extreme than is found in many other less favorably situated localities. :—

MEAN TEMPERATURE (FAHRENHEIT) OF EACH MONTH DURING THE PAST TEN YEARS.

January....32.72° F.	May.....63.24° F.	September..67.72° F.
February...33.12 "	June.....73.54 "	October.....56.03 "
March.....39.16 "	July.....78.74 "	November..43.34 "
April.....53.36 "	August.....75.92 "	December...33.92 "

It is thus seen that only during the months of June, July, and August does the mean temperature rise to a high point. During this period there are very rarely prevailing any epidemic diseases; and the chief mortality occurs among children, especially among the poorer classes.

The health of Philadelphia is at present unusually good. Timely efforts have been made to secure an abundant water-supply to meet the great increase in the demand which must be expected this summer, as compared with previous years. Constant watchfulness will be exercised by the authorities to maintain cleanliness, and to avoid or remove every possible cause of disease.

Within the Exhibition grounds a rigid sanitary inspection will be maintained, under the control of the Bureau of Medical Service; and thus a guarantee will be afforded that no cause of infection or disease will be allowed to occur through neglect of this important duty.

The object of this circular has been to call attention to the unusual sanitary advantages of Philadelphia, and to the preparations which have been made to ensure the highest possible degree of healthfulness during the approaching Exhibition season. It is proposed to issue at certain intervals other circulars, announcing in an official and accurate manner the sanitary condition of the city, so that entire security may be felt by all who desire to visit the Centennial International Exhibition.

WILLIAM PEPPER, M. D.,

15th April, 1876. *Medical Director.*

Vol. 4. JUNE, 1876. No. 12.

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THE PRELIMINARY WINTER SESSION commences September 13th, 1876, and continues till the opening of the regular session. It is conducted on the same plan as the Regular Winter Session.

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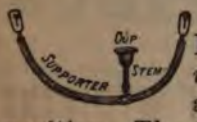

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The plan of study was radically changed in 1871* Instruction is given by lectures, recitations, clinical teaching, and practical exercises, distributed throughout the academic year. This year begins September 28, 1876, and ends on the last Wednesday in June, 1877. It is divided into two equal terms, either of which is more than equivalent to the former "Winter Session," as regards the amount and character of the instruction. The course of instruction has been greatly enlarged, so as to extend over three years, and has been so arranged as to carry the student progressively and systematically from one subject to another in a just and natural order. In the subjects of anatomy, histology, chemistry, and pathological anatomy, laboratory work is largely substituted for, or added to, the usual methods of instruction.

Instead of the customary oral examination for the degree of Doctor of Medicine, held at the end of the three years' period of study, a series of written examinations on all the main subjects of medical instruction has been distributed through the whole three years; and every candidate for the degree must pass a satisfactory examination in every one of the principal departments of medical instruction during his period of study.

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At the end of the first year—Anatomy, Physiology, and General Chemistry.
End of second year—Medical Chemistry, Materia Medica, and Pathological Anatomy.
End of third year—Therapeutics, Obstetrics, Theory and Practice of Medicine, Clinical Medicine, Surgery, and Clinical Surgery.

Examinations are also held before the opening of the School, beginning September 25th.

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FORMULA OF LACTOPEPTINE.

Sugar of Milk,	20 *Ounces.*	*Veg. Ptyalin or Diastase*,	1 *Drachm.*
Pepsin,	4 "	*Lactic Acid*,	2½ *fl. Drachms.*
Pancreatine,	3 "	*Hydrochloric Acid*,	2½ *fl.* "

Powder and Mix.

1st.—It will digest from three to four times more *coagulated albumen* than any preparation of Pepsin in the market.

2d.—It will emulsionize and prepare for assimilation the oily and fatty portions of food, Pepsin having no action upon this important alimentary article.

3d.—It will change the *starchy* portions of vegetable food into the assimilable form of Glucose.

4th.—It contains the natural acids secreted by the stomach (*Lactic and Hydrochloric*), without which Pepsin and Pancreatine will not change the character of coagulated albumen.

5th.—Experiments will readily show that the digestive power of the ingredients of Lactopeptine, when two or more are combined, is much greater than when separated. Thus, 4 grs. of Pepsin and 4 grs. of Pancreatine mixed, will dissolve one third more albumen than the combined digestive power of each agent separately in same length of time.

6th.—IT IS MUCH LESS EXPENSIVE TO PRESCRIBE. It dissolves nearly four times as much coagulated albumen as Pepsin, besides digesting all other food taken by the human stomach

One drachm of Lactopeptine dissolved in four fluid drachms of water will emulsionize sixteen ounces of Cod Liver Oil.

CHILLICOTHE, MO., September 4th, 1874.

I have used *LACTOPEPTINE* this summer with good effect in all cases of weak and imperfect digestion, especially in children during the period of dentition, cholera infantum, &c. I regard it, decidedly, as being the best combination containing Pepsin that I have ever used. J. A. MUNK, M. D.

—oo—

FORT DODGE, IOWA, November 15th, 1874.

I have fairly tried, during the past summer and fall, your *LACTOPEPTINE*, and consider it a most useful addition to the list of practical remedies. I have found it especially valuable in the *gastro-intestinal* diseases of children. W. L. NICHOLSON, M. D.

—oo—

WHITE HALL, VA., January 4th, 1875.

A short time since I sent for some of your *LACTOPEPTINE*, which I used in the case of a lady who had been suffering with dyspepsia for over twelve months, and who had taken Pepsin, and other remedies usually prescribed in that disease, with very little benefit. I ordered the *LACTOPEPTINE*, and was pleased to find a decided improvement after a few days, which has steadily increased. At the present time she appears to have entirely recovered. Very truly, E. B. SMOKE, M. D.

—oo—

INDIANOLA, IOWA, December 11th, 1874.

I consider the *LACTOPEPTINE* a heaven-sent remedy for all digestive troubles. I gave it to a lady troubled with exhaustive nausea and vomiting from pregnancy, with immediate and perfect relief, after all other remedies had failed. She was almost in *articulo mortis*. The third day after taking the *LACTOPEPTINE* she was able to be up. I was called in council the other day to a case of Intussusception; the patient was vomiting stercoracious matter; had retained no nutrition for several days. I gave the *LACTOPEPTINE* with immediate relief. Ingestion was retained. I relieved the bowels by inflation, got an operation, and the patient will recover. I consider the *LACTOPEPTINE* was his *sheet anchor*. I am now using the *LACTOPEPTINE* in Cancer of the Stomach—the only medicine that gives the patient any relief. It seems to act as an anodyne in his case more so than morphine. C. W. DAVIS, M. D.

—oo—

CONTOCOOK, N. H., November 25th, 1874.

After a thorough trial, I believe *LACTOPEPTINE* to be one of the most important of the new remedies that have been brought to the attention of physicians during the last ten years. I have used it in several cases of vomiting of food from dyspepsia, and in the vomiting from pregnancy, with the best of success. The relief has been immediate in every instance. In some of the worst cases of Cardialgia, heretofore resisting all other treatment, *LACTOPEPTINE* invariably gave immediate relief. It has accomplished more, in my hands, than any other remedy of its class I ever met with, and I believe no physician can safely be without it. It takes the place of Pepsin, is more certain in its results, and is received by patients of all ages without complaint, being a most pleasant remedy. I have used *LACTOPEPTINE* in my own case, having been troubled with feelings of weight in the stomach and distress after eating, but always have obtained immediate relief upon taking the elixir in teaspoonful doses. GEORGE C. BLAISDELL, M. D.

—oo—

MO. VALLEY, IOWA, November 12th, 1874.

Some months since I saw in a medical journal a notice of your *LACTOPEPTINE*. Having in charge a patient in whose case I thought it was indicated, I prescribed it in 5 gr. doses. He used it about a week and was greatly benefited. I failed to procure more just then, so I gave him Pepsin instead, the patient thinking it to be the same prescription. After two days he returned to my office, saying that "the last medicine didn't hit the spot, but that which you gave me last week was just the thing, and has given me more relief than any medicine I have ever taken." I consider this a fair test (so far as it goes) of the merits of this new, and I think, invaluable remedy. G. W. COIT, M. D.

One drachm of Lactopeptine will transform four ounces of Starch into Glucose.

Pancreatine and Diastase are more important digestive agents than Pepsin.

COMMUNICATIONS FROM MEDICAL JOURNALS.

We have for several months been prescribing various preparations of medicine containing *LACTOPEPTINE* as an important aid to digestion. It may be advantageously combined with cod liver oil, calisaya, iron, bismuth, quinine and strychnia. *LACTOPEPTINE* is composed of pepsin, ptyalin, pancreatine, lactic acid and hydrochloric acid—pepsin, lactic and hydrochloric acids being in the gastric juice, ptyalin in the saliva, and pancreatine emulsionizing fatty substances. The theory of its action being rational, we have prescribed the various preparations referred to above with more evidence of benefit than we ever observed from pepsin.—*St. Louis Medical and Surgical Journal*, September, 1874.

AN ARTICLE ON LACTOPEPTINE, BY LAURENCE ALEXANDER, M. D., OF YORKVILLE, S. C., IN THE *ATLANTA MEDICAL AND SURGICAL JOURNAL*, NOVEMBER, 1874.

Some time ago a small box, labelled "Physicians' Samples *LACTOPEPTINE*," was placed in my hands, with the request that I would give it a trial upon some one suffering from dyspepsia. Having, like other physicians, a large *per centum* of just such cases always on hand, in which various medicines and remedies had been used without success, I gladly consented, hoping that something had really been found at last to supply the want felt by every practitioner in the treatment of this troublesome complaint. After several months' experience in the use of this preparation, in which it has been thoroughly tested upon a large number of patients with such gratifying results, I am induced to recommend it to the consideration of the profession, feeling confident that, with due care in their diagnosis, and the many little cautions always necessary, such as restricting the excessive use of fluids while eating, etc., and a little patience on the part of the sufferer, its good effects will be seen beyond a doubt.

While I employ it extensively in many deranged conditions of the bowels incident to infancy and childhood, I find it equally efficacious in constipation and all diseases arising from imperfect nutrition in the adult. In sickness of pregnancy it answers well, far exceeding, in my hands, oxalate of cerium, extract lupulin, or the drop doses of carbolic acid, so highly extolled by some practitioners. In its combination with iron, quinine and strychnia, we have the advantage of using, in cases of great nervous depression and debility peculiar to the dyspeptic, our most valuable agent in a truly elegant form.

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To five fluid ounces of water add one drachm of Lactopeptine, half drachm of Hydrochloric Acid, 10 ounces Coagulated Albumen, allowing it to remain from two to six hours at a temperature of 105 deg., agitating it occasionally.

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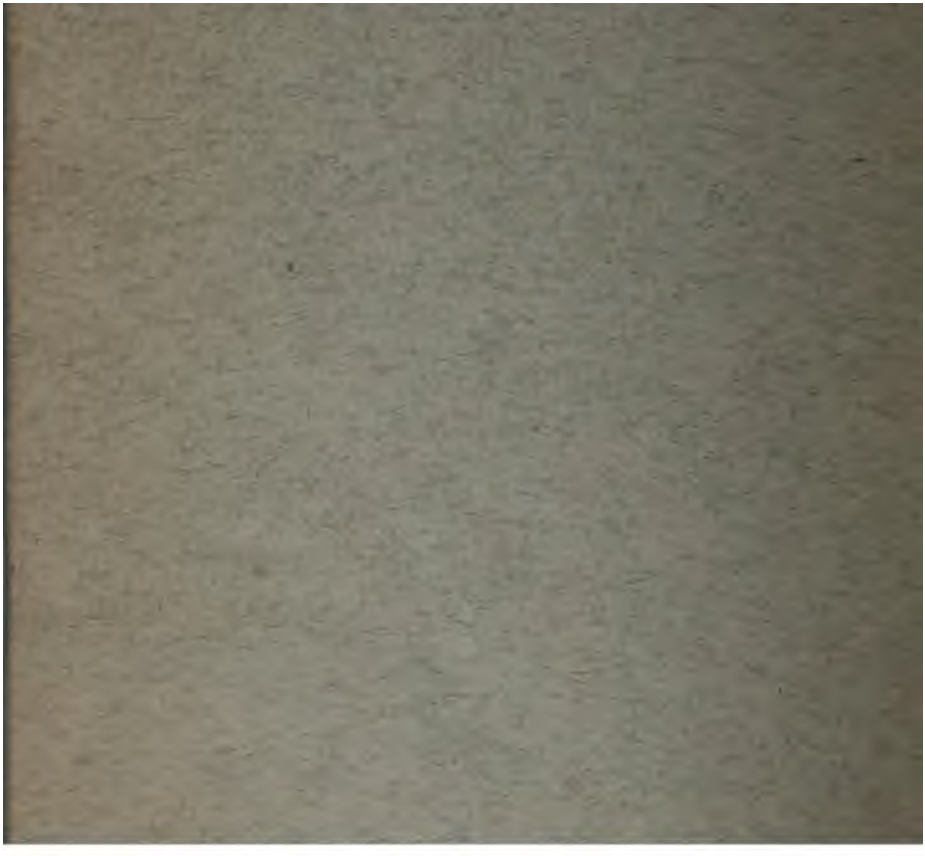

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